

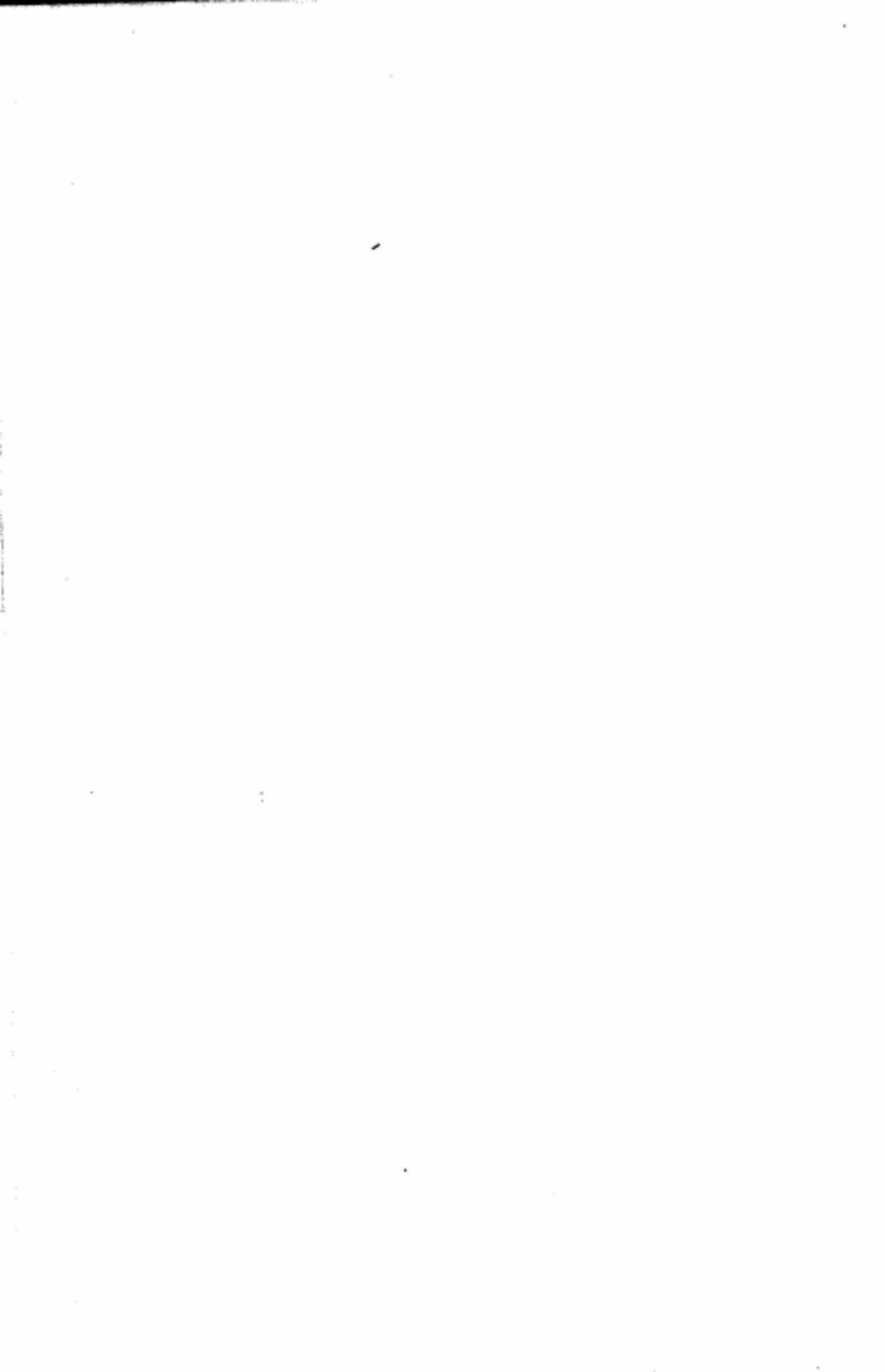
GOVERNMENT OF INDIA
ARCHÆOLOGICAL SURVEY OF INDIA
CENTRAL
ARCHÆOLOGICAL
LIBRARY

ACCESSION NO. 51364

CALL No. 919.105/J.I.A.E.A.

D.G.A. 79.

• 1994 •



THE

JOURNAL

51364

OF

THE INDIAN ARCHIPELAGO

AND

EASTERN ASIA.

919.103

Edited by

J. J. A. E. A.

R. LOGAN, F. G. S.

Member of the Asiatic Society, Corresponding Member of the Ethnological Society of London, and of the Batavian Society of Arts and Sciences.

VOL. VII.

SINGAPORE:

1853.

KRAUS REPRINT

A Division of
KRAUS-THOMSON ORGANIZATION LIMITED
Nendeln/Liechtenstein
1970

CENTRAL ARCHAEOLOGICAL
LIBRARY, NEW DELHI.

Acc. No. 57364

Date 7.8.72

Call No. 919.105

J.I.H.E.A

CONTENTS.

I.

	Page.
Journal of an Excursion to the Native Provinces on Java in the year 1828, during the war with Diponegoro..	1, 138, 225, 358.

II.

Ethnology of the Indo-Pacific Islands, by J. R. LOGAN, Esq., F. G. S. &c.....	20, 105, 186, 301
---	-------------------

III.

The Kei and Arru Islands....	68
------------------------------	----

IV.

Notes of a Trip to the Interior from Malacca, by T. BRADDELL, Esq..	73
---	----

V.

Legend of the Burmese Budha called Gandama, by the Revd. P. BIGANDET..	159
--	-----

VI.

Review.—A trip to the Indian Archipelago in H.M.S. <i>Mesander</i> , by Captain the Hon. HENRY KEPPEL, R. N..	247
---	-----

VII.

Grand Exhibition of Batavia in 1853, by JONATHAN RIGG, Esq.....	261
---	-----

VIII.

Notices of Singapore....	325
--------------------------	-----

Received from Mr. S. Braden, Jan. 1854

INDEX.*

A	
<i>Arru Islands</i> , the Kei and, III†....	63
B	
<i>Batavia</i> , in 1853, Grand Exhibition of, VII.....	261
BIGANDET, The Revd. P.—Legend of the Burmese Budha called Gaudama, V..	159
BRADDELL, T.—Notes of a Trip to the Interior from Malacca, IV..	73
Burmese Budha called Gaudama, Legend of the, V..	159
D	
Dipo Negoro, Journal of an Excursion to the Native Provinces on Java in the year 1828, during the war with, I....	1, 138, 225, 358
E	
Ethnography and Ethnology:	
Ethnology of the Indo-Pacific Islands, 20, 105, 186, 301	
Exhibition of Batavia in 1853, Grand, VII.....	261
G	
Gaudama, Legend of the Burmese Budha called, V..	159
Geography:	
The Kei and Arru Islands, III.....	63
I	
Indo-Pacific Islands, Ethnology of the, II... 20, 105, 186, 301	
J	
Java, in the year 1828, during the war with Dipo Negoro, Journal of an Excursion to the Native Provinces on, I..	1, 138, 225, 358
K	
<i>Kei and Arru Islands</i> , III.....	63
Keppel's Trip to the Indian Archipelago, Review of, VI...	247
L	
Legend of the Burmese Budha called Gaudama, V..	159
LOGAN, J. R.—Ethnology of the Indo-Pacific Islands, V. 20, 105, 186, 301	
M	
<i>Malacca</i> , Notes of a Trip to the Interior from, IV.....	73
N	
Notices of Singapore, VIII.....	325
R	
Review. A trip to the Indian Archipelago in H. M. S. "Mæander," VI.....	247
RIGG, J.—Grand Exhibition of Batavia in 1853, VII....	261
S	
<i>Singapore</i> , Notices of, VIII.....	325

* N.B.—Names of authors in CAPITALS; Geographical names in *Italics*;
Arts and Sciences in **old English**.

† The Roman figures refer to the number of the article in the table of Contents

ERRATA IN THE "JOURNAL OF AN EXCURSION &c." IN THE
NO. FOR JUNE-DECEMBER 1853.

PAGE

- 360 line 8 from bottom, for husbandary, read husbandry
361 line 22 from top, for matters, read mottoes
line 23 from top, for nediti, read videte
364 line 20 from top, for parts, read posts
line 7 from bottom, for 10 cavalry, read 100 cavalry
367 line 10 from top, for Javenese, read Javanese
368 line 24 from bottom, for Klattan, read Klatten
line 16 from bottom, for id. read id
last line for natives, read native
369 line 2 from top, for Buddah, read Budha
line 3 from bottom, after the word kind insert of
370 throughout for Klattan, read Klatten
line 3 from bottom, for whether read whither
371 line 4 from top, for Suki- read Suku
line 11 from bottom, for county, read country
372 line 3 from top, for Jarah, read Jarak
line 6 from top, for Djocjokarta, read Djocjokarta
line 6 from top, for around read around
line 20 from top, for Sukie read Suku
374 line 6 from top, after the word spot insert of
line 20 from top, for Sukie, read Suku
line 5 from bottom, between some and water insert of the
377 throughout for Sukie, read Suku

ERRATA IN CHAP. V., SEC. 4 & 5 OF "ENQUIRIES INTO THE ETHNIC
HISTORY AND RELATIONS OF THE DRAVIRIAN FORMATION &c."

IN THE PRESENT NO.

PAGE.

- 33 t. belongs to p. 31.
34 line 15 from top, for "la, li," "la, li."
37 line 19 from top, for "ir" read "is"
38 At the beginning of lines 3 and 7 place the fig. "2," and at the beginning of
lines 4 and 8 place the fig. "3." In line 7 for "-an" read "-as"
line 21 from top, for "z end" read "Zend"; and "Selow," read "Slav."
40 line 25 from top, delete "The plural postfix (ebi or ni)."
line 30 from top, for "ebi" read "ebi"
42 line 18 from top, delete the comma betwixt "Objective" and "anl"
45 line 12 from top, for "eastern" read "western"
line 20 from top, for "generally" read "general"
47 line 7 from top, for "agglutinatic" read "agglutinative"
last line, for the second "n," read "n"
49 line 2 from top in 3rd note after "Dative" insert ,
line 15 from top, for "ho" read "ho"
line 16 from top, after the word "locative," insert ,
line 19 & 20 from top, for "guizo nak" read "guizonak"
line 7 from bottom, after the word "plural" insert ;
line 4 from bottom, after fem insert .
line 3 from bottom, after "honorific" insert ,
after "maac" insert ,
50 line 13 from top, delete "and" and insert ,
line 18 from top, for "appears" read "appear"

- 50 line 11 from bottom, betwixt "as" and "independent" insert "an"
- 51 line 1 from top, after "love" insert "tuten"
 line 2 from top, for "tuten" read "tuten"
 line 12 from top, for "him-have-I" read "him-have-I,"
 line 19 from top, after "analytically" insert ,
 line 14 from bottom, after "Scythic" insert ,
- 52 line 5 from top, after "American" insert ,
 line 6 from bottom, for "vocalics" read "vocalularies"
 1st line of the note for "substantive" read "absolute"
 4th line of the note after "addressed" insert .
 6th line of the note after "gayon" insert "fem."
 7th line of the note after "simply" and "S" insert ,
 8th line of the note after "honorific" and "S" insert ,
- 53 line 11 from top, before the first "the" insert "or overflowed"
- 54 line 5 from top, after "Amharic" insert
 line 15 from top, after "Bederatz" and "9" insert ,
 line 9 from bottom, for "Indo-Germanic" read "Indo-European"
 line 5 from bottom, for "man" read "Man"
 line 3 from bottom, for "Kama" read "kama"
 line 2 from bottom, for "Tibu" read "Tib." and for "e-tori" read "etori"
- 55 line 2 from top, after "the" insert "single"
 line 10 from bottom, after "ones," insert —
 line 7 from bottom, after "liquid" insert ,
 1st line of the 1st note after "Sec. 2." insert (vol. vii., p. 309-311).
 last line of 2nd note dele " " after "Kol"
- 56 line 4 from top, after "probably" and "also" dele the commas.
 line 5 from top, after 1st "is" insert ,
 line 7 from bottom, dele "particularly" and insert ". They combine with Caucaso-Yeniseian and American roots in"
- 57 line 8 from top, dele "In Hungarian it is *e, i, a*"
 line 17 from bottom, for "persons" read "person"
 line 14 from bottom, after "branches" insert ,
 line 8 from bottom for "verb" read "verbs" and for "is" read "are"
 line 3 from bottom, for "od" read "od"
- 58 line 7 from top, after "group" insert ,
 line 12 from top, "gpoky" read "gpoky"
 line 19 from top, for "babi" read "babi"
 line 12 from top, (note) after "language" insert "or languages,"
 line 18 from top, (note) betwixt "have" and "been" insert "long"
 line 6 from bottom, (note) after "westward" insert "in-ert"
 line 5 from bottom, (note) betwixt "the" and "widely" insert "other"
 last line (note) for "Kindred" read "kindred"
- 60 line 10 from top, for "gaga" read "gaga"
 line 3 from bottom, for "on" read "in"
 first line (note) for "part I" read "Part I"
- 61 1st line for "Dative" and "Ablative" read "dative," ablative"
 2nd line for "Objective" read "objective"
 line 9 from top, after "a" insert "large and archaic"
 line 13 from bottom, after "Ní" insert, "un, n &c.," and for "possessive" read "Possessive."
 line 9 from bottom, for "objective" read "Objective"
 line 4 from bottom, for "possessive" read "Possessive."
- 62 line 7 from top, dele "the."
 line 4 from bottom, for "Limp." read "Limb."
 line 2 from bottom, after "possessive" insert .
 line 3 from bottom, after "ablative" insert .
- 63 line 2 from top, after "incessive" insert .
 line 6 from top, for "Sibilant" read "sibilant."
 line 11 from top, for "nek" read "nek."
 line 12 from top, for "objective" read "Objective"
 line 14 from top, for "teged" read "teged."
 line 18 from top, after "λ" dele the comma and insert =
 line 16 from bottom, before "euph." insert ,
 line 16 from bottom, for "objective" read "Objective"

- 63 line 14 from bottom, after "Be" dele (and insert , after "mbe" dele) and insert , and for "objective" read "Objective"
- line 3 from bottom, before "Singpho" insert "in"
- 64 line 4 from top, after "particles" dele ,
- line 11 from top, after compound insert ,
- line 12 from bottom, for "Sing," read "sing."
- 64 line 9 from bottom, for "We" read "we"
- line 7 from bottom, for "Lep" read "Lap"
- 65 line 11 from top, for "We" read "we"
- line 14 from top, after "ama" insert
- line 16 from bottom, for "Substantives" read "Substantives"
- line 2 from bottom, dele the 1st "S."
- 66 line 6 from top, for "etse" read "etse"
- line 14 from top, insert " " before "is"
- line 12 from bottom, for "person" read "pronoun"
- line 7 from bottom, after "si" insert ;
- line 5 from bottom, after "and" insert "the" and after "Sing." insert
- 67 line 3 from top, before "I." insert "1st"
- line 7 from top, for "banga" read "banga"
- line 17 from top, before "THOU" insert "2nd"
- line 20 from top, for "senun" read "senun"
- line 16 from bottom, before "HE" insert "3rd" and after "She" insert , IT.
- line 2 from bottom, after "pronoun" insert "in"
- 68 line 17 from top, for "Verb absolute" read "Verb absolute."
- line 4 from bottom, betwixt "iana" and "tada" insert
- 69 line 2 from top, for "i-d-i" read "i-d-i"
- line 5 from top, for "gi" read "yi"
- line 8 from top, after "at" insert ,
- line 17 from top, for "Oblique" read "Obli." [under "ama S"
- line 17 from top, place "minu, me-i" under "mina S" and "sinu"
- line 19 from top, place "si S, nne P" under sinu"
- line 15 from bottom, betwixt " " and "in" insert
- line 14 from bottom, after *buse* insert ,
- line 13 from bottom, after "Thou" dele " " insert
- line 3 from bottom, after "modern" insert ,
- 70 line 2 from top, for "Scythic-Arian" read "Scythico-Arian"
- line 10 from top, for "o-wa" read "o-wa"
- line 19 from top, before "laba" insert "3"
- last line, for "vu-i-k" read "vu-i-z" for "vu-i-ki" read "vu-i-zi"
- 71 line 7 from top, for "Illar." read "Illat."
- line 8 from top, for *karhu-ne-na* read *karhu-ne-na*
- line 17 from top, before "(B)" insert fig. "4"
- line 12 from bottom, place "o-k" in the same line with "m-i" and "t-i"
- line 11 from bottom, place "ov-e-k" in the same line with "t-i-e-te-k"
- line 10 from bottom, place "nek-i-k" in the same line with "nek-te-k"
- line 9 from bottom, place "o-k-et" in the same line with t-i-te-k-et
- line 4 from bottom, for "ben" read "ben"
- line 3 from bottom, after "ed" and "Plural" insert , and for "connects" read "connect"
- 72 line 2 from top, after "pronouns" insert
- line 10 from top, after "directive" dele , and insert "if"—for "being" read "be" and after "euphonic" insert " ". But it may be objective."
- line 11 from top, betwixt "from" and "directive" insert "their"
- line 18 from top, after "possessive" insert " ")
- line 19 from top, dele), after "infixed" and after "the" insert "analogy of the"
- line 21 from top, for "prove" read "proves"
- line 15 from bottom, after "Dative" insert ,
- line 14 from bottom, after "to-the" insert ,
- line 4 from bottom after "prefixed" insert "(substantively)" and after "pronouns" insert "(possessively),"
- last line for "ak" read "ax"
- 73 line 8 from top, after "a'has" insert ,
- line 9 from top, after "a'has-e" insert , and for "this of" read "this-of"
- line 14 from top, for "ak-e" read "ak-e"

- 73 line 16 from top, after "a'haz-a" insert "k-az"
 line 17 from top, dele "house-of father-" insert "father-of* house-"
 line 17 from bottom, after "szemem" insert , after "szem-cim" insert ,
 line 16 from bottom, after "szemel" insert ,
 line 15 from bottom, after "szeme" insert ,
 line 14 from bottom, after "szem-nu-k" insert , for "szem-e-i-tek" read
 "szem-e-i-tek"
 line 13 from bottom, for "szem-et-ek" read "szem-et-ek" after "szem-et-ek" insert ,
 line 6, 6 and 7 from bottom, after "szam, szai, szaya," and "szayok" insert ,
 line 4 from bottom, after "verb" dele . and insert " , n. g."
 last line, for "varya" read "varya" and for "yak" read "var-yak"
 74 line 8 from top, after "s'szem" insert , ["Samoiede"]
 line 13 from top, after fig. "4" insert . and for "Samoide" read
 line 12 from bottom, place "n S. gada P." under "side, sit" and after
 "n S." insert
 line 9 from bottom, for "S. (Pret.)" read "s (Pret.)"
 line 5 from bottom, for "ayw" read "ayio" after "Objective" insert ,
 75 line 18 from bottom, dele "it"
 line 12 from bottom, for "Formations" read "Formatives"
 76 line 7 from top, dele "Enz. am" insert "verb aba."
 line 18 from top, after "Future" insert
 line 20 from top, after "si-z" insert "p"
 line 21 from top, for "un" read "un"
 line 17 from bottom, for "2nd uk" read "uz."
 line 6 from bottom, for se-wish- &c. read sev-ish- &c.
 line 4 from bottom, for "Malagasi" read "Malagasy"
 77 line 5 from top, for "mi; ni-ye; ki-ya, khi-ya" read "mi; ni-ye; ki-ya,
 khi-ya"
 line 7 from top, for "indif." read "indif."
 line 10 from top, for "tch" read "tch."
 line 17 from bottom, after motome insert ,
 line 11 from bottom, after "Future" insert , and after "motomeo" insert
 "o-zu,"
 line 10 from bottom, after "motomete" insert
 line 7 from bottom, before "o-monowo" insert "motome"
 78 line 6 from top, for "motome-naunda" read "motome-naunda"
 line 7 from top, after "Tibetan" insert "Egyptian"
 line 8 from top, dele , after 2 insert "nd"
 line 9 from top, after "roots" insert ,
 line 16 from top, after "can" and "general" insert ,
 line 19 from top, after "tongues" insert ,
 line 20 from top, after "vowels" insert ,
 line 21 from top, after "Tibeto-Chinese" insert ,
 line 8 from bottom, after mutations insert ,
 79 line 6 from top, for "lil" read "lil"
 last line, for "ulfa" read "wulfa"

The following Notes to be added at the Pages undermentioned:—

Page 52 line 11 from top, after "African" add †

† But in Mid-African languages the influence of a postpositional formation is also traceable.

Page 55 first line, after "Chap. V." add *.*

" " line 9 from top, after "question" add †

" " line 4 from bottom, after "affinities" add †

. This supplement has been misplaced. It should have preceded Sec. 4.

† As no grammatical account of any of the N. E. Asian languages has been published. It was my intention to notice them incidentally only, in the Scythic and American sections. But their ethnologic importance has induced me to throw the results of an examination of the vocabularies into a separate section which will precede the American. The better arrangement would have been to place the N. E. Asian, Japanese and Korean in one group, as they have special affinities amongst themselves and with the American languages. Japanese and Korean approximate

more to the Tatar family than the proper N. E. group, and have also been more influenced by Chinese.

† The Indo-European and Semitico-Libyan plural *i* is probably connected with the Scythic.

p. 72 line 17 from top after "postf. *k*." add †

72 line 11 from bottom, after *titek-et* "add *

† The possessive has a further refinement. In the forms given in the text the thing possessed is single. Where it is plural the composite pronoun indicates it by incorporating a distinct plural particle, e. g. *en-ye-m* "mine" becomes *en-ye-i-m* when the object of possession is plural. So *m-l-e-n-k* "ours" becomes *m-l-e-n-i-k*; *ti-e-d*, *ti-e-i-d*; *t-i-e-te-k*, *t-i-e-i-te-k*; *ov-e*, *ov-e-i*; *ov-e-k*, *ov-e-i-k*. In these forms it is obvious that the additional plural particle *i* belongs to the possessive *e* as a substantive. If we represent *e* by our substantive "possession" *t-i-e-te-k*, literally rendered, is "thou-(pl.)-possession-thou-(pl.)" and *t-i-e-i-te-k* is "thou-(pl.)-possessions-thou-(pl.)."

* In *mi-nk-et* and *ti-tek-et* the *nk* and *tek* are probably possessive although the poss. particle *e* is absent. They are possessive pronominal postfixes with substantives. The forms of Tibetan and some of the allied Ultraindo-Gangetic tongues are similar,—the substantive being followed by a possessive particle and the latter by the directive, showing that the directives are really substantives.

p. 73 line 17 from top, after "of" add *

73 line 10 from bottom, after "*e-l-k*" add †

* Dative for Possessive.

† See Note on preceding page.



THE
JOURNAL
OF
THE INDIAN ARCHIPELAGO
AND
EASTERN ASIA.

JOURNAL OF AN EXCURSION TO THE NATIVE PROVINCES ON
JAVA IN THE YEAR 1828, DURING THE WAR WITH
DIPO NEGORO.

Samarang, 21st June—Cast anchor in these roads about 2 P.M. outside of all other vessels lying here; we have been ten days coming from Batavia, but anchored almost every evening about 8 to wait for the land wind, with which we set sail early in the morning and steered away from the coast, returning with the sea breeze in the afternoon to anchor again near the land. Our voyage has certainly been a long one, owing to contrary winds and frequent calms, but to me it was not tedious, as I was very comfortable on board.—Nothing extraordinary occurred, nor did we see anything worthy of remark, except some smoke at a distance at sea on the 15th, near Pamanukan, which some of us conjectured to be caused by a battle between the Pirates and some unfortunate coasting vessels—we could hear no guns, however, and it must have therefore taken place very far from us, and being during a dead calm, we could have given no assistance. There were upwards of 600 persons on board, including troops for Samarang and Borneo;—the weather was fine nearly the whole voyage.

22nd June—Took leave of the Commandant and Officers of the *Bellona*, and left that ship early in the morning with the

Secretary (Anglicé, Purser); the ship lay a long way off the shore, so that we were $1\frac{1}{2}$ hour rowing into the river; it was cool weather, however, fortunately for us, but the sun began to be troublesome when we landed between 7 and 8. The Church bell was ringing for Divine Service, it being Sunday, and we met several groups, chiefly females, proceeding to Church—among the rest a number of orphan children, neatly drest in an uniform manner, and walking regularly in a row, from the Orphan House, an excellent institution, especially in this country. These circumstances remind one of European towns, and there are others to assist the impression—in Samarang the houses are built close together, as they were originally at Batavia, but generally smaller, many have two stories, with rows of trees before them. The Church is a neat building, though at present in want of paint and white-washing; it has a square tower on each side of the entrance, in one of which is a large dial, that strikes the hours and quarters, the only one I believe in Java; it has also a Cupola or Dome, covered with Siraps or wooden tiles (shingles) which gives the building quite an eastern appearance. The other public buildings are the Hospital, formerly the Government House of the North-east Coast, a spacious handsome edifice—Barracks for Infantry and Cavalry, a Residency Office and Town Hall, with other departments, in one large building—an Orphan House, an “Oud Mannenhuis,” or refuge for poor old men, bearing the date 1775; also a Catholic Chapel, in the upper story of which the priest has his apartments. There are three inns for Europeans, in one of which I took a room. It is considered the best, but would not hold such a rank in Europe, it is called the “Stads Heeren Logement” and enjoys privileges as such. For instance, when a Government officer not belonging to the place, stays at Samarang a short time on duty at the public expense, he is obliged to pay the keeper of this inn for board and lodging, according to an established tariff, although perhaps he never enters the house.—The landlord is a low German, formerly the steward of a ship, but who now sits at the head of his own table, and tries to place himself on a footing with his guests, with some of whom he converses, drinks, and plays at billiards—he is probably growing rich, which makes him presuming; this class of people generally make their fortunes in Java; his predecessor returned to Europe sometime ago with a handsome one, as did the late inn-keeper at Buitenzorg, who had been the Governor’s coachman.

In the afternoon hired a chaise and drove out to Bodjong, about 2 miles S. of Samarang, where the Residency house, a large and handsome building, stands—most of the European inhabitants live along this road and some of their houses are neat and spacious, with pretty gardens, in the European style, in front and around them.

23rd June—This morning was employed in paying visits with two of my Bellona friends, who introduced me to some of their acquaintances here. These visits were performed on foot, between 10 and 1 o'clock, it was therefore very warm work, especially as Samarang is noted for the heat of the climate. It lies in a low situation along the sea shore, at some distance inland is a range of low hills, which probably obstruct the wind from the higher mountains in the interior, and the close way in which the town is built certainly adds to the heat, which the brick walls imbibe and reflect. Every one here complains of the effects of the war in the interior, upon commerce, internal trade, the price of daily necessities, the public tranquillity, and the economy necessary in the administration—produce is not brought down, many plantations are destroyed, the roads are unsafe in some places, provisions scarce in others, and labourers difficult to procure except at high rates, while many public works of necessity or utility must be put off till the end of the war, from want of means to pay for them.

This town was formerly fortified, but the ramparts were destroyed in 1819, being considered unnecessary in those peaceful times, and detrimental to the health of the people; when the disturbances broke out in 1825, the inhabitants wished for their walls again, and regretted that their security had been sacrificed to appearance.—There were very few military in the place at the time, and these were immediately sent to the native districts, the Burghers were called out, and military service required from every one; the deficit of walls was supplied by wooden *flessades* erected round the town, where the walls had stood. These remain till now, except in a few places, where openings have been made for general convenience, since this part has become quiet; they were evidently constructed in a hurry, and would be but an imperfect defence against an enemy.—If the rebels had advanced upon Samarang after their success at Demack in 1825, when the unfortunate *volunteers* were killed in the rice fields, they would probably have found it an easy capture, for there was no troops, the inhabitants were badly prepared, and in a great alarm. The vessels in the roads were already preparing to receive the females and children, and the merchants had got their property ready for removal.

24th June—This morning I took a long walk (for India) through the China camp or village, which is separated by walls and gateways from the rest of the town. As usual I found it dirty, full of people, and small traders; in the shops were cotton cloths of different kinds, from India and Europe, and the native fabrics, porcelain and earthenware, iron-work in arms, agricultural implements, kitchen utensils, locks, &c., brassware, trinkets, drugs, paper umbrellas, shoes, saddles, and other leather necessities, provisions of various kinds, raw and prepared, &c. After breakfast called on some more of the inhabitants, with two Officers of

the Frigate, which produced invitations to dinner for to-morrow and the day after.

25th June—I had agreed to walk down to the landing place early this morning to see the landing of 570 Alfoerese, who had been brought from the island of Ternate, to assist in the war. These people are nearly in a savage state, entirely without clothing, except the chiefs, the principal of whom wear an imitation of the Dutch uniform, and the inferior ones are dressed in the usual Malay style, with the exception of their hats; these are pointed and very high, fancifully colored and ornamented. Their arms are those of an entirely wild race, the bow and arrow, bambu javelins and spears, small longitudinal shields, and parangs or choppers, without any sheath, but tied round their middle, or carried loose in the hand; with these they cut off the heads of their enemies, in which they are said to be very expert. Some of them looked fierce and wild, an effect which their loose bushy black hair tends to increase, as they wear no turban or handkerchief on the head, like the Malays and Javanese; most of them however appeared very quiet and peaceably disposed, and much astonished at the buildings and all they saw around them; there were a few boys among them, but no women, contrary to the general practice of the natives, whose wives often follow them to the seat of war. Some few of them speak a little Malay, but very imperfectly indeed.

26th June—An offer was made to me this day by my new acquaintance — of a conveyance to Salatiga or Boyolali if I liked, without expence. I gladly accepted it, and early to-morrow morning was settled for my departure, with one of the officers of —'s department, in a chaise with post horses, which he was entitled to as travelling on duty; the charge to individuals is one guilder a *paal* (about an English mile) besides small fees to the coachman and running grooms, so that the expense for any distance becomes considerable.

They work in leather here very cheaply, and for natives the work is tolerably good—half-boots may be bought for 2 guilders, (about 3s 6d,) they are not near so durable as English boots, but these cost 8 times as much; shoes 1 guilder, (1s 8d) in London I paid from 10 to 12 shillings; a hand portmanteau with brass buckles, to put on a horse, cost me 2 guilders copper, one of half the size cost 15s in Coventry Street, to be sure it was Japanned, and more strongly made; these I bought at the door from hawkers, but when made to order, boots and shoes cost more. A Javanese *Hoby*, or one who bears that name, which was given to him by the English, was recommended to me, and I gave him an order; his prices are 5 guilders or 8s 4d for boots, and 2 guilders for shoes, but his workmanship is superior by far to that of the other copper-coloured crispins of Samarang.

I dined to-day at Col. —'s with several officers, among

whom my acquaintances of the Frigate, including the first Lieutenant. Among the guests were also 3 officers of the *Alfoerese*, whom I saw, landed yesterday—one had the rank of Major, the 2 others were Captains. The former had once commanded the *Ternate* fleet, and was called Admiral, his buttons still displayed an anchor, he is a brother of the Prince of Ternate; these men speak good Malay, but do not seem to be good Mussulmen, for they drank wine freely, and appeared not at all disturbed at a large roast pig, which fronted them on table, and reminded me of *Elia's* humorous essay in the *London Magazine*.

27th June—At 2 o'clock this morning my servant awoke me, the officer with whom I was to travel to Boyolali, being at the door with the carriage; I had not looked to be roused thus early, and was far from pleased at it, many a yawn and stretch it cost me before I could muster resolution to jump out of bed, and hurry on my clothes by the light of a dim lamp.

The morning was cold, but clear, and "by the light of the moon" I found the conveyance waiting at the gate. It was an open chaise with a hood, pretty well filled with baggage, my companion, myself and two servants in front; there were 6 horses to it, the roads being heavy after the rain, and our journey upon an ascent; the wheels were secured with bambus, tied across the spokes, and in a bambu tray underneath hung a large trunk, mine was fastened on behind, and 3 "loopers" (running grooms) hung on as they could, with their short whips, with which, jumping down from time to time, they assist to urge on the jaded backs that drew us. My companion was muffled up in a thick blanket, and seaman's woollen cap, to resist the cold night air (English readers will hardly believe this), and I found my thick Camlet Boat-cloak very comfortable for the same purpose, under which I wore a dressing gown of *Bath-coating*, cloth waistcoat and trowsers, without feeling too warm.

The first part of the journey we passed in sleep, by starts and snatches, frequently broken by the rude jolting of our vehicle over a bad road; the morning was too obscure to permit of my seeing the country till near sun-rise, when we were beyond Unarang where General Jansens capitulated to the English in September 1811, after his retreat from Cornelis.

We now saw the great volcanic mountain called Merapi, said to be 9,000 feet high, and near it another as high or higher, called Marbabu. There was an explosion of the former in 1823, the latter is supposed to be extinct. The high road passes to the left of these hills, about 6 or 8 miles from their bases.

The road continues to ascend gradually, in some places more suddenly. Here two buffaloes are fastened in front of the horses to assist in pulling the carriage up the height, which these little horses could not do alone, if the ascent is very steep, and the road bad. Four buffaloes are sometimes used, this forms a singular equi-

page altogether, proceeding at a walking pace; the bridges are very numerous, some of them in such bad repair, that we got out and walked over them, in one place the bridge had been carried away altogether by a sudden swell in the river during the heavy rains, the banks were at least 20 feet high, yet the water had risen above them and the bridge too; now there is not a drop of water, the bed of the river is quite dry, and we walked, or rather scrambled over the rough huge stones that form it. Arrived at Boyolali about noon, without stopping at Salatiga.

28th June—Before sun-rise the open space before the Fort was occupied by the peasantry, chiefly women, with provisions, fruits, &c. for sale, and I walked through this temporary *Passar* or market, which became fuller by degrees, till about 10 it was absolutely thronged with buyers and sellers, whose voices kept up a continued humming the whole day; provisions of all kinds were the chief articles of sale, beef, *ding-ding* or dried meat, fowls, dried and salt fish, rice, curries and native soups, cakes of various descriptions plentifully impregnated with oil and black sugar, sweetmeats, pickles, spices, salt, fruits in great variety, most of which are never used by Europeans. I bought however two dozens mangosteens, all I could find, for 40 cents (about 3½d English) which are very refreshing in the morning. The bazar, as usual, was planted with Banyan trees, here called Waringin, whose wide spreading branches afford a pleasant and convenient shade.—These bazars yield a revenue to Government, from the tolls or duties paid by those who bring their wares for sale, formerly these duties belonged to the native sovereigns, who farmed them out to Chinese; these *Jews of the East* generally committed great extortions and imposed on the simple natives in every way. In 1812 Government took the management of them into their own hands, giving the native princes an annual compensation in money, of 120,000 dollars to the Susunan, and 100,000 to the Sultan for the Bazars and Toll-gates (where goods passing through the country pay toll) together, which was secured to them by treaty; in peaceful times the revenue yielded by these taxes produced much more, during the present war, however, the Government collect much less than they have to pay to the native princes. There are European officers stationed in the several districts to superintend the collection, assisted by minor Javanese chiefs, who receive the tax from the people. While walking through the bazar, my thoughts recurred to the bazars in London, and the contrast was very striking—a year ago I was in a bazar, surrounded by wealth and elegance, the *chef d'œuvres* of European skill, ingenuity and luxury, where the temptation to buy some beautiful trifle was increased by the pretty looks and pleasing manners of the fair sellers. The bazar in which I now found myself was held on the sandy ground, the articles exposed for sale were for the most part calculated to disgust, rather than

attract an European, and this feeling gained strength from the dirty, half-clad, sun-burnt, ugly persons of the sellers, mostly females, whose mouths were filled either with *siri*, or a quid of tobacco, or a cigar, and whose screaming, harsh tones formed as strong a contrast to what Shakespeare calls "an excellent thing in woman." The reflections all this led to were not agreeable, and I hastened to leave the Boyolali bazar, not without a sigh to the memory of days gone by. In the evening we walked along the road for about two miles, it was a beautiful moon-light, and very cool. This place lies very high, about 1,300 feet, and the air is therefore pure and healthy; we passed over the beds of or three rivers, which were quite dry, but in the rainy monsoon are deep and rapid; their beds are composed of large stones, probably ejected, like the stream itself, from the neighbouring volcano. A year ago no European could have ventured to walk out in this way, for the road was infested with predatory bands, owing to the insurrection; this neighbourhood is now quiet and clear of the insurgents.

There is a small fort here, built, I believe, about the close of the great war of Java, 70 or 80 years ago; it now mounts 5 guns of 8 lb. and is garrisoned by 80 men—it is much out of repair and could offer no effectual resistance to an European enemy, but is of use to keep the rebels bands at a respectful distance, and maintain the communication by the high road between Samarang and Surakarta; outside the fort are a number of bambu buildings in ruins—these were occupied by the expedition that arrived about a year ago from Holland; the building of them cost £15,000 to Government. This is another proof of the carelessness with which in some cases the public money is disbursed, while in others the service actually suffers from the parsimony of our rulers.

29th June—At 3 this morning —'s carriage arrived to take me to Surakarta with a kind letter pressing me to come this day; I had meant to stay a few days longer with my friends here, but this politeness of — made it incumbent on me to change my plan. We took a ride before breakfast to a village 2 miles off, where the remains of an old temple was to be seen, the materials were brick, wood, and mud, and there was nothing remarkable, nor apparently very ancient about it; the natives however hold it in veneration, and no dogs are allowed to approach it. At 11 I took leave of my friends, promising to repeat my visit, before leaving the interior, and set out for Solo. The road descends perceptibly, the country is a wide plain, bounded on the West by the mountains Merapi and Marbabu, on the East by that of Lawie, and on the South by the Gunung Kidul, or Southern Hills, of minor elevation. The plain was one sheet of rice cultivation, but the harvest is now all in, except in some few spots where water is scarce, and the progress of the grain consequently slower through its different stages. We changed horses twice,

at Banyu-dono and Kalitan, where I was again reminded of the war by the Bentings (temporary stockades or fortifications) and the native soldier parading before them, or wandering about the fugitive *Passars* at the road side. Arrived at Solo about 2, where the Resident received me very kindly, and introduced me to his lady whom I had not seen before.

30th June—Rose soon after 5 o'clock, and rode out with Colonel N. and his lady; it was moon-light when we left the house, and a beautiful morning sun dawned upon us, we rode through some fine avenues of trees, chiefly tamarinds and banyans, afterwards through a part of the *Kraton* or Palace, and then over a fine plain, bounded by the great mountain Lawie; we returned at about 7, after a most pleasant ride.

After breakfast the Colonel introduced me to the *Radin Adipati* or Prime Minister, who came to pay a visit officially, which he does twice a week,—this is called making his report; this chief is of middle age and looks rather cunning than intelligent, he was the instructor of the present sovereign, who calls him familiarly Bapa (father) and speaks to him in the Court language, which is a great distinction, as the common dialect is generally used here towards inferiors; all the affairs of Government are managed by the *Radin Adipati*, who receives the reports of the dependant chiefs, and gives them orders, without troubling the Emperor.

The Colonel having received from the Commissioner General a letter addressed to the Emperor, who had appointed this morning to receive it, I had an opportunity of witnessing the ceremony through the kindness of the Colonel.

It began at 10 o'clock by the arrival of the Emperor's State Carriage, which is very like an old fashioned English Post Chaise, but with carved and gilt ornaments, much the worse for wear, to carry the letter to the Palace, the coachman had a scarlet coat and hat on, but the whole set-out was shabby; before it came several *Tumungungs* (nobles of the 2nd class) preceded by numerous followers, who formed a double file, through which they passed to deliver their message to the Resident, which was that the Susunan was ready to receive the Commissioner's letter. The letter was then brought forward, in a gold salver, covered with a velvet napkin with gold fringe and placed in the empty carriage. The *Tumungungs* now took leave of us, and returned in regular order to the Palace, leaving the carriage standing—when a sufficient time had been allowed them to reach the Palace before us, the carriage set off at a slow pace, with two gilt paper Payongs (Umbrellas of State) carried over it, one behind and the other at the side; the Colonel's carriage followed immediately behind, in which were himself in full staff uniform, his Aid-de-Camp, (a Country-born officer) another gentleman and myself. Some European Hussars followed the carriage, and trumpets were sounded when the procession set forth.—Proceeding

at a funeral pace, we entered and crossed the Alam-Alam, or large walled plain before the palace, where some of the *imperial guards* were drawn out under arms; very different in appearance and equipment from the *garde imperiale* of Napoleon; they were shabbily dressed, and not in an uniform manner, though it was evidently meant for an uniform. They were armed with muskets which they presented, and the royal flag was lowered, when the carriages containing the Commissioner's letter and the Resident passed; the officers, who were in red, while their men wore blue, lowering their swords at the same time; the whole being a paltry imitation of the military ceremonies of Europe.—The native music struck up as the carriage stopped outside of the "*sitingil*" or *high ground*, being the principal entrance to the Palace, by a flight of steps.—Here a number of chiefs were ranged on each side, with flags open and furled up, spears, and other paraphernalia of Javan pomp—these saluted the Resident and his suite as they passed; numbers of minor dependants were seated on the ground, in groupes, in different parts—a band of Javanese musicians, with European brass instruments (in front of which a *fiddle* was conspicuous) attempted to play *William of Nassau*, the national air of the Netherlands, when the Resident passed; the uniform of these swarthy minstrels, red, green and yellow, was more in the style of a country fair show, such as I have seen when a child, than anything else I can remember—we passed through several courts, separated from each other by narrow passages, formed by high walls, at right angles, with sharp turnings, and numerous gate-ways. At one of these gate-ways were stationed two female attendants of the Prince, of middle age, and plainly dressed, though of some rank, who received the Resident, shook hands with him without speaking, and turning about, preceded him as far as the court in which the Susunan was sitting; this is a part of the customary etiquette on such occasions. This style of building seems well adapted for the purposes of defence to the inhabitants, and accords with the jealous suspicion which forms one of the characteristics of Javan Grandees. At length we reached the Royal *Pendopo*, or open hall, where the Susunan or Emperor was seated to receive us. This building is nearly square, with a lofty roof covered with shingles descending rather low, there are no walls to these Pendopos, they are open on all sides but sometimes two or more are built close together, as was the case here. Other buildings occupy the whole of the four sides of the court in which it stands, the roof is supported by two rows of pillars, which are square, and plainly constructed of wood without base or capital; they were covered with matting at this time, perhaps to preserve the gilding and paint, or it may be to conceal the decay of it. The interior of the roof was not covered in, but shewed the rafters supporting the shingles, which however were neatly cut of one size

and laid on very regularly. Some carved work under the centre of the roof, in the Javanese taste, was gilt and painted red, forming a sort of canopy to the throne, but very high above it. Under this sat His Majesty; on a European carpet folded double, was placed a kind of large stool, seemingly made of silver, partly gilt, covered with two large green velvet cushions, bordered with gold lace, this was the throne, generally called *Dampar*, on the left of it was placed a chair, for the Resident, also on the carpet, on the right was a small table or stand on which was placed the imperial betel box, spitting pot and other appendages, apparently of gold, covered by a cloth. At a little distance on each side of the throne, in front and at right angles with it, were placed a straight row of chairs, those on the left side were occupied by four Pangerans or Princes, the first of whom was the Pangarang Adipati Poroboyo, uncle of the reigning Susunan, and a Lieutenant-Colonel in the Netherlands army—next to him sat Pangarang Adi Negoro, father-in-law of the Emperor, then two or three vacant chairs were left, after which the two other Pangerans were seated. Above the seat of Prince Poroboyo a chair was also vacant, this is the seat of the Susunan's great uncle, Panumbahan Bunie Notto, when at Court. These chairs were of very old fashioned and plain make.

Behind the Susunan, to the right, stood what appeared to be a kind of throne, or elevated seat, with cushions, covered with dark green cloth, and without ornament. Near this stood an old painted table with a tallow candle burning upon it among other things; at the back of the hall or shed, immediately behind the Susunan, but at some distance were seated or rather squatted on the ground several women in a row, armed with swords &c. this was the imperial body-guard; at a greater distance, in front and outside of the hall, several nobles and chiefs were placed in a similar attitude, looking towards the Sovereign, among whom was the Radin Adipati or Premier. When we came within view of the Susunan we uncovered, and walked straight up to the throne at a slow pace; when the Resident reached His Highness, he stood up to receive him, and we made our bow, at the same time taking his royal hand, and asking after his health in the usual Malay mode. The Colonel took the letter from the salver, which had been carried after him from the place where we got out of the carriage, and presented it to the Susunan, who having taken it from the Resident, desired him to sit down on the chair at his side; he then waved his hand to us to be seated on the right hand row of chairs, opposite the Princes, and I took the second chair from the throne, immediately opposite the Emperor's Uncle, leaving, after his example, one vacant seat. His Highness then took a pair of scissors from the table at his right hand, and began to cut open the yellow damask, in which, according to native usages, all letters to Princes are sewn up, with the address, written in the Javanese language, on

a band of paper sealed round the middle. While thus employed the Emperor put several questions to the Resident, among which were some referring to myself and one other of the party, whom he had not seen before—having opened the silk case and withdrawn the letter, he read it to himself, beginning at the *latter* part, about two-thirds of the contents being taken up with "*les compliments d'usage*," which he took for granted without reading; when he had finished reading the letter, and laid it on the table in its yellow case, the Susunan made a sign to one of the chiefs in front, which I conclude was to order the salute to be fired, as is customary on these occasions, for the guns were heard presently afterwards.—If the Imperial Artillery were to be judged of by their performance of this salute, they would not be very formidable to a storming party, for the guns were fired at long and irregular intervals; the reports were not of equal strength, I believe some of the guns used were 2 lb. field-pieces, others larger; there were 21 guns fired, which lasted, I think, nearly ten minutes—during this time we were served with tea and coffee, so weak and bad that it might have passed *for either*—the Resident and Emperor conversing together, and sometimes with the rest of the party present. Soon after wine was brought by three country-born European (or half caste) domestics, each holding a silver salver, on one of which were placed 2 small wine glasses, about half full of *white* wine, these were for the Emperor and Resident—on the other salvers were larger glasses, each containing about a *spoonful* of *red* wine, one of these was presented to the Europeans, and the other to the Native chiefs, on each side of the Susunan. This scanty allowance appeared singular, but I found it convenient, for as etiquette renders it necessary to take the wine thus offered, which was done 4 times, it would have been disagreeable, at this hour of the morning, to have emptied the glasses, had they been *filled*.

The Resident drank the health of the Emperor with the first glass—with the second, which was brought after a short interval, the Emperor gave the health of the Commissioner General—the third toast was the health of the Ratus or Empresses, and the last that of the Princes belonging to the Court, both proposed by the Resident, and of course joined in by us with due ceremony.

Before the wine was brought, I should have mentioned that the Susunan beckoned to the Radin Adipati or minister of state, who was seated on the ground, among the other chiefs, in front and *outside* of the hall of audience. Even this high officer of government is not allowed to approach the sovereign in an erect posture, but like all others advanced crawling over the floor in a manner which appears to an European ridiculous and abject, by the help of the hands and heels, the hams resting on the latter at every step. This way of progressing, as they say in America, is as difficult to describe as it must be to perform correctly. When the minister had

advanced within a respectful distance of the Susunan, yet near enough to speak to him in the low tone prescribed by the rules of a Javan Court, he seated himself, *tailor's fashion*, on the stone floor, opposite the monarch's seat, made the customary salute, by raising both hands, joined, to the forehead and awaited the opening of the discourse by his master. They seemed to be speaking on trivial subjects for they frequently laughed, but as the discourse was carried on in Javanese, I could not understand it. Before the wine was ordered the Susunan made another sign to the Radin Adipati, who again saluted His Highness, and returned to his station, in the same manner as he had left it.

After the four toasts above mentioned had been drank, with a short interval between each, the Resident rose and took leave of the Susunan and Pangerangs in the same order as when we entered, bowing and shaking hands with each by turns, in the order in which they stood, and then retiring uncovered, the Susunan and Princes remaining standing before their seats. When out of sight of the former we put on our caps and hats, and were accompanied to the carriage by some of the nobles of each rank, through the passage called *Sirimenanti*, the 3rd gateway (Kamandungan), the intermediate court, the 2nd gateway (Brojo Nolo) another court and flight of steps, to the *Setingil* or first gateway, * native music playing. Here we took leave of the deputation of chiefs, who returned to the interior of the *Kraton* (Palace) while we entered the carriage, and proceeded across the *Alam-alam* or walled plain in front, where the European music struck up, the guards again presented arms for the Resident, and the flags were lowered, as when we came in, in military style.

I have forgotten to mention in the proper place, that on the high wall, in which is the *Setingil*, first gateway, or principal entrance to the palace, are mounted 8 pieces of cannon, 4 on each side.

In the *Alam-alam*, or open court in front, are also 3 pieces of cannon, of immense length, resting on clumsy wooden carriages. They are pointed towards the grand entrance; one of them is of brass, or other composition, the others iron, but all apparently wrought, and not cast; they are of heavy calibre, the brass one especially.

In the *Alam-alam Kidul*, or Southern court of the palace, which is behind it, are 6 pieces of cannon, equally badly mounted and apparently of different calibre. They defend the entrance to the *Kraton* on that side, being ranged in a straight line before it, pointing towards the road. Here also are two beautiful Waringin trees, the trunks defended by brick enclosures, between which three or four carriages might pass abreast, while their branches above are intermixed and spread wide around. Two similar trees are also in

* See Raffles' Java. vol. 1. p. 83.

the front court or alam-alam. These trees are objects of veneration and designate the residence of a prince or noble, when planted in this way. They are also generally found in the market places and burying grounds, to which they give a graceful ornament and grateful shade. They are in general found there in Sumatra also.

Shortly after our return from the palace, we proceeded again with the Colonel's lady and daughter and several gentlemen, to another part of the building, where a grand wedding is to take place to-morrow. The parties are of high rank and belong to families who are particularly esteemed and distinguished by the Resident. The lady is daughter of Prince Ingabey, and sister of one of the Queens of the present Susunan; the bridegroom is grandson of Prince Mangko Negoro, whose grandfather was made an independent prince, after the great Java War, in 1758. The preparations for this marriage are therefore very grand, and nothing else is talked of. The object of our present visit was to see the bride's hair dressed; it may appear strange to Europeans that this should be done in *public* and the day *before* the ceremony of the marriage, but such is here the custom from time immemorial.

Having reached the *Pendopo* or open hall of the bride's father, we were welcomed by the *Gamelang* or native band of music and receiving very politely by himself. Along the outside of this building were arranged in long files the bridal presents, in open bambu boxes or rather cages, each borne by two or more men. They consisted of every thing that is required in a household, cloths, handkerchiefs, cooking utensils, dishes and bowls, rice, fowls, fruit, sweetmeats and pickles, medicines and perfumes and even bags of copper money, with many other articles which I had no time to view as we passed along. In the centre of the hall, at the back, appears the state bed, glittering with gold lace and fringe, with a canopy of carved and gilt wood-work and curtains in which the Netherland's national colours (red, white and blue), were ingeniously displayed. On the bed were numerous cushions and pillows, piled high at the back and sides, covered with cloth or velvet, and with edges or borders of gold lace; at each side stood a large candelabrum of wood, holding numerous lamps, though it was in the middle of day; there were also pots with incense burning in different parts.

The space around the *Pendopo* outside, or below the steps, was filled with women of all ages, seated on the ground, to view the ceremony. In a corner of the hall was spread a carpet, and upon this the bride, her family and immediate attendants were seated. Before this a row of chairs was placed for the accommodation of the Resident and his party. When the many greetings had been exchanged among these numerous assistants, the ceremony commenced. The bride is a young girl of about 16, well made, of a clear, pale, yellow complexion, and with a face that would be

pretty, were it not for that disgusting betel in the mouth. Her manners are pleasing and modest, though she did not seem confused, or overcome by the presence of so many strangers. Her neck and arms were uncovered, which is the *full dress* at court. She was seated in the middle of the carpet, surrounded by her female relatives;—before her was an old woman, the Truefitt of Solo, to whom the important office of preparing her head was intrusted; she combed the hair at least for half an hour, then made a bunch knot behind, called *glung*, which took nearly as much time, after this the hair immediately round the forehead was separated into little bunches, each of which was next formed into a diminutive circular curl not larger than a pea, arranged something like a fringe or row of beads, in a straight line at the top of the head. The down on the temples was then shaved off with a razor, the eye-brows were also shaved, with great pains and nicety, into a particular form—oil and aromatic herbs were then rubbed over the head, and a whitish yellow powder (*bori*) on the forehead. There were many other minutæ of this toilette, which doubtless escaped my notice while conversing with the rest of the party. The whole lasted I think between 2 and 3 hours, during which the poor girl sat motionless, with great patience and good humour, sometimes talking to her companions, but mostly silent. It would be a hard trial, thought I, for an European Princess, especially in public. The Resident's lady observed that she would never have been married, if this ceremony had been a necessary preliminary. When it was at length finished, the bride arose, and came to receive our congratulations. I thought all the time and care that had been bestowed on her head thrown away, for she did not look so well as before—in the eyes of her relatives and companions, however, it was different; they admired her head dress, and I her patience.

We was then shewn the bride's chamber, which was much like an European sleeping apartment, behind the *endopo*—there was a handsome bed, with gauze curtains, ornamented with silver fringe, flowers &c., a cheval glass, a French toilette with all its appendages, a French clock, and many other elegant articles. By the head of the bed were a large box and bag filled, as we were told, with medicines, being considered one of the first requisites in domestic economy among the Javanese;—there appeared enough of them to last the happy couple their whole lives. There were several boxes and other articles of native manufacture about this room, which by the simplicity of their make, and meanness of their materials contrasted rather strangely with the more rich and elegant productions of European skill and ingenuity.

This was the last of forty days, during which the bride has been confined to her apartments, preparatory to the ceremony, a custom prevalent on Java, but not observed for so long a period among the lower orders.

1st July—This being the day appointed for the wedding of

the brave Prince Se Bukti with the amiable Princess Gusina, we paid the former a morning visit to congratulate him, at the palace of his grandfather, where, according to Javanese customs he has been secluded 40 days, undergoing a kind of training. We found him, as his bride yesterday, under the hands of the hair dresser, and subjected no doubt to a similar trial of patience; we made fortunately for our's only a short stay, and then proceeded to the bride's father's, to offer our congratulations to that family also.

After dining early, to have more time at our disposal, we went in the carriage to witness the procession of the bridegroom to the house of the bride. This was as solemn and pompous as Javanese vanity and shew could make it. It opened with drums and fifes, preceding several companies of infantry in the service of the bridegroom's grandfather, in blue uniforms, well-equipped, and altogether superior to the Emperor's guard that we saw yesterday. There were some cavalry also, among whom I admired a brother of the bridegroom in a fancy hussar uniform, covered with silver, finer even than the fine *tenth*, who looked very well, and sat his horse admirably. Chiefs of all ranks in their court dresses, dependents gaily attired, bearing banners, muskets, spears, sabres and arms of all kinds, the bridegroom's dresses, betel box, cigar case, slippers, arms, and other personal paraphernalia, native musicians, a train of young boys, dressed in an uniform manner, who had been just circumcised and are maintained for a certain time by the family of the young couple, dwarfs of both sexes, with hunchbacks, hideous burlesques of humanity, priests, soldiers, women, beggars, and a motley et cetera, too numerous to mention here, formed this singular procession. In this midst of it was the bridegroom on horseback, splendidly attired, in the court costume, that is, naked to the loins, with gold embroidered petticoat and trowsers. Two gilt payungs were held over his head, and he was surrounded by a number of young men, his relations and friends, on horseback, all handsomely dressed and ornamented.

The procession moved at a slow pace towards the house of the bride, where it was received with a most bruyant tune, from the Gamelang, aided by native performers on European instruments hired for the occasion. In the first great shed or hall, chairs were ranged all round, and here the bridegroom, his companions, and the numerous guests seated themselves, the former preserving, as is usual, a most dignified silence and formal attitude. Of the bride we saw nothing; but her father came out to receive his son-in-law and the company, which was all male in this hall, the women being in the inner apartments. We waited a long time, thus formally seated, first for some of the older princes of the family and then for the fortunate hour chosen by the priests; at length the *nika* or religious part of the ceremony was performed, the high priest and bridegroom were seated in two chairs, opposite, and close to each other, in the middle of the hall, other chairs were placed

close round them for the nearest relatives, the Resident &c. The priest recited the formula in a low tone, at times receiving responses from the bridegroom, and at others quoting, as I thought from the Arabic words he used, from the Koran. This part of the ceremony lasted from 5 to 10 minutes and concluded with a prayer recited by the priest alone. When it was concluded, the bridegroom proceeded to pay his respects to the bride's relatives and his own, who were again seated in a long row. This is done by squatting on the ground before them, kissing their feet, placing the closed hands between those of the person to whom the compliment is paid, and laying the head on their knee; this he performed in turn to about thirty persons, not once standing the whole time, which is forbidden by Javan etiquette, but crawling from one chair to the other on his hands and heels as before described. This part of the ceremony must have been very fatiguing to him, the bride's father was much affected, and shed tears while receiving this homage from his son-in-law. This Javanese prince forms a noble exception to the generality of native nobles;—he is very domestic in his habits, extremely partial to his children, of whom he has had seven, all by one wife, and what is almost a miracle among these people, he has never had any other! It is natural that filial and parental tenderness such as they are known in Europe, should be found in this Indian family, so differently constituted from others. Some of the princes have had seventy children and upwards, legitimate and otherwise, between whom, however, the law of Islam makes little distinction. The present Susunan is an illegitimate child. Among so many wives and children, the affections of the head of a family must be so divided and subdivided, that the share of each becomes very small, while these numerous claimants for support and affection must of necessity be jealous, envious, and ill-disposed to each other. I have forgotten to mention an interesting part of the marriage ceremony:—after the religious formula was over, and the bridegroom had done homage to all the male relations of both parties he was led in state to meet the bride, who advanced, with their female relatives from the inner apartments and they met as it were half way. Both were then seated on the floor, water was brought, with which the bride washed the feet of the bridegroom, this is in token of the obedience due from the wife to the husband; afterwards dry rice was brought, of which the bridegroom gave a part to the bride, this is a symbol of the husband's obligation to provide for his wife's maintenance; the bride received the rice carefully in her cloth, not letting a single grain fall to the ground, this betokens the economy with which the wife is to manage the household; a *siri* stand with all its requisites was then produced, from which the bride and bridegroom each prepared a *siri* for the other, this is a token of their living together, and mutually assisting each other; two eggs were afterwards let fall and broke on the pavement by one of the attendants, but I did not quite understand the meaning of

this part of the ceremony. A Javanese hoe was next handed to the bridegroom, with which he raked up a little heap of sand, I believe this is a token that the husband is to cultivate the earth for their joint support, if necessary, which considering the rank of the parties on this occasion, is not likely. After these ceremonies, the bridegroom was led into the inner apartments, whither the bride also returned, each numerously attended, to change their dress for the evening. We returned to the residency house for about two hours to rest and dress, and proceeded again to Prince Ingabey's where a ball and supper in the European style were to conclude the day.

The Pendopos were well lighted with chandeliers, lamps and candles, and a large company was assembled, Europeans and half-caste as well as natives. All the Military and Civil Officers, all the Christian population of Solo had been invited. The Susunan was also present in an European dress, the coat being an imitation of the full uniform of a general in the Netherlands army, with epaulettes of real gold, very well made and a brilliant star on each breast; he wore a dress sword and military hat with feathers corresponding with the coat, the rest of his dress was plain except the diamond knee and shoe buckles, with white silk stockings, and large clumsy shoes. This was the more remarkable as the Javanese shoe-makers at Solo are neat workmen, and His Highness, like most natives of rank, has small feet and hands. He opened the ball with the Resident's lady in a English country dance, in which he performed with more activity than grace, one or two nobles followed his example, the bride's father led out the wife of the commandant, and Lieutenant-Colonel Prince Poroboyo another European lady, these two princes danced with more ease and grace than the Emperor. After sometime, waltzing succeeded, in which also the Emperor performed, first with a very tall gentleman and afterwards with a very little lady, this was a failure. His Highness had sent his billiard table to the party, and during the evening played frequently with some of the Europeans, in pools, as did many of the native nobles. Many of these wore the Dutch military uniform, with Major's or Colonel's epaulettes, some of them were mere boys, the relatives of the Susunan, and it was curious to see them squatting around his chair or running messages for him, reflecting as I thought no distinction on the dress they wore. Liquors of every description were served in abundance the whole evening, and many of the native guests made repeated visits to the sideboards, as was evident when they sat down to supper, in spite of the great prophet and his anti-bibacious laws.

The bride and bridegroom remained seated the whole night in the inner shed or hall, before the state bed, on a handsome carpet. They were now both splendidly dressed in the Javanese fashion, and the bride had an elegant tiara on her head, blazing with diamonds. Here the guests went up by turns to pay their compli-

ments and congratulations, which they rose to receive from the principal personages of the company. They were surrounded by the female relatives of both, who but for their diamond ear-rings, broaches, &c. could not have been distinguished by their dress from other native women; they wore the sarong and cabaya, or petticoat and bed-gown of cotton, the former of native manufacture, the latter of Europe chintz; their hair is turned back, and tied in one large bunch behind, in which are enclosed the melati, champaka, and other sweet scented flowers. They are besides constantly using musk and fragrant oils on these occasions, which give a peculiar perfume, this is fortunate for their European visitors, whose olfactory nerves are sensitive, for these combined odours partly neutralize the strong and disagreeable smell of the siri which they chew almost unceasingly, there was accordingly no want of siri boxes and spitting pots in gold and silver on this occasion.

About midnight we sat down to supper, at a table forming 3 sides of a square, in the same hall or pendopo where the dancers had performed, but outside of this space, between the inner and outer row of pillars, about 120 persons, I think, sat down, of whom nearly equal numbers were natives and Europeans, or their descendants, of all shades and hues; the supper was plentiful, and liberally if not elegantly arranged, and ample justice was done to it by most of us, especially the native chiefs and nobles. One of these, a younger brother of the Susunan, who sat near me, drew my observation from his assiduous attention—not to the fair one who sat next to him, but to the good things before and around him; he emptied a whole dish of potatoes at once upon his plate, and kept it always filled with whatever was offered to him, flesh, fish and fowl altogether, seeming more particular in quantity than quality, and making the most incongruous mixtures, such as stewed carp with mutton chops, roast duck with custard, and so on; the generality of Javanese, however, are rather abstemious in their eating, and seldom take more than cakes, fruit, soup, or vegetables. With regard to wine and liquors they use greater indulgence, and my princely neighbour emptied a decanter of madeira, during supper, besides occasional glasses of beer and claret for variety's sake. The Susunan led the Resident's lady to table, and most of the princes took some European, either female or male. None of the Javanese ladies honored the table with their presence; this is contrary, I believe, to their etiquette, but they could see all that was going on from the inner hall, in front of which the principal personages were seated at table and where they and the new married pair supped, sitting as before described. Before supper was half over, the giving of toasts commenced, and continued as long as we were at table, perhaps full two hours; the first was the health of the King of the Netherlands, then that of the Commissioner General, the Lieutenant Governor-General, the Emperor, the Resident, the bride and bridegroom, their parents, the

other princes, the native troops, the ladies, the welfare of Java and a long list which I have forgotten. Fortunately we were not obliged to drink bumpers, and the Dutch claret is thin, yet I did not escape a headache the next day, but the mode of drinking these toasts is fatiguing, that is standing up and cheering before you sit down: the Resident proposed them for the most part, for the master of the house, in Dutch and Malay both, in order to make them understood by all the guests.

After supper dancing recommenced, but without spirit, it was getting late and many of the dancers probably felt that the lightness of their toes had transferred itself to their heads. The Resident, his lady, myself and one or two others now went to the inner apartment, where the bride and bridegroom were sitting with their immediate relations, and took our places beside them, on the carpet, like so many tailors. We remained about half an hour in this familiar posture conversing with them; this seemed to please them much, especially when the Resident took the bride and bridegroom, one on each knee, in the Javanese way, and called them his children. I should have mentioned that the latter is a great favorite and protégé of the Resident, having lived a long time in his house, and accompanied him on several excursions during the present troubles; he speaks the Dutch language tolerably well and seems to be a sensible and well disposed youth.

We took leave at nearly 3 o'clock, when the party was already broken up, the Emperor returned home with us in the carriage of the Resident, who escorted him in person to the entrance of his apartments. I forgot to observe that His Highness during the evening, retired a short time, and returned with another coat on, embroidered with gold, but without the scarlet cuffs and collars of the general's uniform, he had still the gold epaulettes however, and diamond stars, this was a little sample of personal vanity and fondness for shew which are among his characteristic qualities. It is true that he is of an age when they are general, even among Europeans, being about 21.

ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.

By J. R. LOGAN:

LANGUAGE.

PART II.

THE RACES AND LANGUAGES OF S. E. ASIA CONSIDERED IN
RELATION TO THOSE OF THE INDO-PACIFIC ISLANDS.

CHAPTER II.

NOTICES OF THE PHYSICAL HISTORY OF THE RACES OF INDIA AND
ULTRAINDIA.*

THE pre-historic antiquity of the civilisation and commerce of India, and the succession of races that have moved into it and mutually influenced each other, render it difficult to analyse its ethnology. The only way to obtain any definite idea of its normal character, is to consider it as divested of those elements which have been introduced, in the later eras of its history, by races whose native lands are external to India, and to allow for the influence which they have exerted on the older tribes. On the north, India is or has been in contact with several races which have advanced into it and affected its ethnic character. The principal of these are the Ultraindian, the Tibetan and the Arian. The Tibetan and the Arian are well marked and well distinguished from each other. The Ultraindian is not only related in stock to the Tibetan but has intermixed with it. The Arian race appears to have begun to spread from the western side of the Jumna into the basin of the Ganges probably less than 4,000 years ago. The population of the western portion of the Gangetic valley is now nearly pure Arian, that is the other elements are very slight. It is probable that the native tribes were here, at an early period of the Arian era, reduced to a helot state, or driven in amongst the aborigines on the north and south of the valley. In the lower part of the valley, the Arian

* Since Prichard's departure, some English philologists have entered the field of ethnology, and begun their labours by depreciating the value of physical comparison. One of them goes so far as to ignore its claims altogether and to rest ethnology on language alone. This is simply absurd. Language is the most persistent and the most intellectual of all human arts, but it is still an acquirement, whereas the physical characters of a race constitute the race itself. A man's identity is independent of his language. He may forget his mother's tongue or may never acquire it. The substitution of the English dress in place of tattooing or of a steel for a stone knife, does not transform a Polynesian tribe into an English one, and the supercession of the native tongue by English is merely a similar change in the external habiliments and implements of the mind. To say that in the investigation of the ethnic history of a tribe, its language is every thing and its physical character nothing, is to convert ethnology into grammar and human races themselves into wind instruments playing a variety of glossaries. It is because I am impressed with a contrary notion that I consider it unsafe to enter upon an ethnic review of the languages of Ultraindia and India, before glancing at the physical history of the tribes which speak them.

progress appears to have been slow and partial. They did not completely and permanently subjugate the native tribes or dislodge them. They made conquests and founded kingdoms, but the mass of the population remained non-Arian and the Arian dynasties were frequently supplanted by native ones.* The Arian princes do not appear to have been able to maintain their power in Behar and Bengal. In the fourth century before Christ, the celebrated Chandragupta, a Sudra, became king of Magadha, and no purely Arian dynasty was ever re-established.† But the priests, the religion, the civilisation and the literature of the Arians retained their power. The native languages were deeply Arianised and the physical character of the population was greatly modified. The Bengalis are still smaller, and, in general, have less prominent features, than the Hindustanees. The Koech, Bodo, and other purer remnants of the older race, are evidently in part, and some of them in a great degree, indebted for the improvement in their physical type, when compared with the Tibetan and Chinese, to the fact of their having been for more than 3,000 years in contact with Arians and Arianised Indians, although it is probable that they assumed their distinctive character at a much earlier period. Tibetans may have spread into some parts of the Himalayas and directly or indirectly influenced the native Gangetic race before the Arians advanced into India, and it is certain that a great influx of them took place some centuries after Christ. From the remotest period, the Gangetic race must have influenced or been influenced by the Ultraindian, because there are no great natural barriers, like the Himalayas, between them. A survey of the character and distribution of the Gangetic, Ultraindian, and Asianesian peoples, renders it certain that the same Himalayo-Polynesian race was at one time spread over the Gangetic basin and Ultraindia. As this race is allied to the Chinese and Tibetan, it is probable that it originally spread from Ultraindia into North-eastern India. I will afterwards shew reasons for believing that the race itself is a modified one.

From its position and character, India must have been peopled

* I have again and again ransacked the Asiatic Researches and other authorities within my reach, for positive information on the ancient history of Bengal. But the search has been fruitless. We have a feeling in reading papers like Wilford's that there must be something in them, but in such antiquarian coruscations it is very difficult to distinguish the glimmers of truth amongst the multitude of false lights that are constantly starting up and leading the writer astray. On the whole I have found the most satisfactory data in Dr Buchanan Hamilton's notes on the physical character, customs and traditions of the lower Gangetic population. They induce a conviction that in India history must be the slight and imperfect superstructure and ethnology the solid basis. Hodgson, I suspect, will do more in the work of clearing away rubbish and restoring the lost annals of the Ganges, than Lassen with all his erudition and genius for historical research.

† Chandragupta and his successors were surnamed Maurya from his mother Mura, but the name was probably a tribe one. It is still found as an ethnic and geographical name in the adjacent Himalayas (Murang, Murmi). In later eras native tribes obtained predominance over considerable areas at different times, and amongst them the Kiranti, Kirat or Kichak, the Tharu, and the Koech.

from the earliest Asiatic era. As soon as any of the adjacent countries were first occupied, it could not fail to receive a population from the north. While navigation remained in its infancy, any accidental immigrants by sea would be absorbed into the mass of the native population and produce no perceptible effect on its physical character. But from the time when the adjacent shores of the Indian Ocean began to be the seats of commercial and maritime nations, the Peninsula must have been exposed to the regular influx of foreign traders and adventurers. From the antiquity of the Egyptian civilisation, it is probable that the earliest commercial visitors were Africans from Eastern Africa or Southern Arabia. It is certain that the subsequent Semitic navigators of the latter country at an early date established that intercourse with India, which they have maintained to the present day. The trade between India and the West appears to have been entirely in their hands for about 3,000 years. During this period the Arab navigators not only remained for some months in the Indian ports, between the outward and home voyages, but many settled in them as merchants.

The influence of African and Arabic blood must have preceded that of Arian in the Peninsula. In the time of Menu, perhaps 1,000 years B. C., the Arians had not spread as conquerors into the Peninsula. But they may have begun to pass into it as settlers and propagandists at an earlier period, as the Hindu religion appears to have been established at least several centuries before the Christian era. When their conquests began, and how far they extended, is not known. Rama's invasion from Oude was probably directed to some adjacent portion of the Dekhan, but it is not credible that it extended beyond the Godavery. An expedition from the valley of the Ganges, through the forests of Gondwana, to the civilised Telinga nation of Andra on the lower Godavery, would not be improbable in itself, but the foundation of the legend would rather seem to have been a war upon a tribe of Gondwana itself. In after ages the Arian ingredient in the Peninsular population became considerable, but it has not modified the native races in the same degree as it has done the Bengalis. The languages are still essentially distinct and the non-Arian physical element remains strong.

From this glance at the principal foreign influences to which India has been exposed in the later eras of her history, it is obvious that we must look to the Southern races chiefly for examples of the ancient physical and linguistic types. If we there remark prevalent forms and languages which are neither Ultraiidian, Tibetan, Arian nor Arab, we may conclude that they represent the archaic Indian type better than the Northern races. Physically the population of Southern India is one of the most variable and mixed which any ancient ethnic province displays. A glance at a considerable assemblage of Klings and Tamulians of different castes and occupations shews that the varieties, when

compared with those of similar assemblages of men of other races, such as Europeans, Ultra-Indians or Indonesians (including negroes in the two last cases) are too great to allow of their being referred to a single race of pure blood. Some are exceedingly Iranian, more are Semitico-Iranian, some are Semitic, others Australian, some remind us of Egyptians, while others again have Malayu-Polynesian and even Simang and Papuan features. Yet when the eye takes in the whole group at once, they are seen to have all something in common. They are not Iranians, Polynesians, Papuans, &c., but South Indians. It is possible to explain such a phenomenon by reference to the characters of other nations on the Indian Ocean, if I am right in believing that races may blend without the different types being effaced, and that while certain exclusive or excluded castes, or sequestered geographical sections of the population, may preserve one type better than another, all may continue for some thousands of years to be reproduced in softened and modified forms even in the least secluded portions. In Southern India we find languages of one formation, which is broadly distinguished from the Arian or Sanskritic on the one side, and from Tibetan and Ultra-Indian, on the other. It appears to me that we also find a tendency to certain peculiar physical traits, which are also neither Ultra-Indian, Tibetan nor Arian. In saying that these traits are East African, I suggest the points in which they agree and contrast with the northern types. The typical East African head, or that which is removed both from the exaggerated prognathous form prevalent amongst the Guinea negroes and the highly Semitic form characteristic of tribes that have been deeply crossed by Arab blood, is, in some respects, intermediate between the Iranian and Turanian, while it has specialities of its own. In the South Indian population as a whole, the bridge of the nose is generally less prominent than in the Iranian and much more so than in the Turanian. The cheek bones are more,—often much more,—prominent than in the Iranian, and less so than in the typical Turanian, the projection being frequently anterior more than lateral. The lips are full or turgid and turned out, frequently with sharp edges. Slightly prognathous heads are not infrequent. Even where the root of the nose, between the eyes, sinks in, the upper line as a whole is much more thrown out from the face, than in the Turanian head, so as to render the point comparatively sharp and prominent. The *alæ* have an upward expansion, leaving the lower part of the septum exposed and the elongated nares open and conspicuous,—a Semitico-African trait. In the Turanian the septum is contracted and thickened at the base, pulling down the point of the nose, or rendering it low and obtuse, forcing the *alæ* to spread out laterally and making the nares rounded. The eyes in the Dravirian are large, or of a full size, horizontal and well separated, and the beard is generally sufficiently strong. The Africo-Papuan pyra-

nidal nose, with a deep and sharp sinking in at the root, is common, particularly in some of the lower castes in which the colour is nearly black. In certain of the higher castes, in which the complexion is fairer, an Egyptian style of features is not infrequently observable. In this the nose is not indented at the root. It is long and slightly curved; the eyebrows are delicate and deeply curved; the eyes almond-shaped and somewhat oblique; and the chin is short. In general, however, the physiognomy is more Iranian than the E. African and Egyptian. The person, where the Arian or Semitic crossing is not striking, is generally rather small and slender, the legs, in particular, being very thin compared with those of the Gangetic race. The colour varies from black to different degrees of brown and yellowish brown, in general contrasting strongly with the UltraIndian and Indonesian races, with whom they may be compared in the Straits Settlements.

The S. Indian type varies from the preceding forms to others which are more Semitic or more Iranian, but even in these something of the normal character is frequently perceptible, particularly in the nose and mouth. One of the most remarkable varieties is that of the Tuda, which may be described as Indo-Semitic. The Semitic character is seen in the breadth and massiveness of the head, the great orbits and eyes, the receding forehead and the Jewish expression which is observable in some families. They are tall, handsome, and athletic, with bold noses and expressive eyes. They are strongly distinguished from the more normal type, but are evidently referable to the archaic Semitico-Turanian era of S. India.

The other sequestered tribes of S. India appear to belong chiefly to the lower form. In some cases they approximate to the more Turanian African type, in which the nose is flatter, the eye smaller, the beard scanty, and the person shorter. There is so considerable a difference between this type and the more Semitic, that, whatever may be the original relationship of the two, it is necessary to recognize both as existing in India at the earliest era which ethnology can descry. A similar phenomenon presents itself on the western side of the Indian Ocean, and, what is still more important with reference to India, it is found also in the negro population of the eastern side. Many of the eastern tribes are very short and slender, small eyed, flat faced and beardless, while others are middle sized or even tall and robust, with the Semitico-African beards, aquiline or pyramidal noses, raised nares and large eyes of the other archaic type of South India. Both types preserved a black complexion, alike in Africa, India, the Andamans, the Malay Peninsula, the Malayu-Polynesian Islands and Australia, although modifications of colour also occur throughout this area. The little weight of the present absence of spiral hair in S. India as a fact against the conclusions to which all this points, is shewn by some of the spiral haired Papuan tribes of South New Guinea and Torres Strait being often more Africo-

Semitic and S. Indian in their physiognomy than the Australians, while the latter have the fine hair of the S. Indians and some Mid-African nations and a linguistic formation which resembles the S. Indian more than any other in the world.

There is reason to believe that the strong Africanism of some of the lower South Indian castes is really the remnant of an archaic formation of a more decided African character. In some places Tamil books record that the original inhabitants had "tufted" hair and some of their customs were Africo-Papuan. The black Doms of Kumaon have still hair inclining to wool. When we consider the position of India between the two great negro provinces, that on the west being still mainly negro even in most of its improved races, and that on the east preserving the ancient negro basis in points so near India as the Andamans and Kida, it becomes highly probable that the African element in the population of the Dekhan has been transmitted from an archaic period before the Semitic, Turanian and Iranian races entered India, and when the Indian Ocean had negro tribes along its northern as well as its eastern and western shores. At all events this is the most simple, and apparently the only reasonable, explanation of the African physical and linguistic elements in India, Ultraindia and the Indo-Pacific islands.

I conclude that the basis of the present population of the Dekhan was of an African character and that it was partially improved by Turanians or Irano-Turanians and Semitico-Turanians from the N. W., and afterwards by more advanced ancient N. E. African and Semitic settlers. The distinctive cultured language, arts and navigation of the South Indian race, shew that they had attained civilisation before the Arians converted them to Hinduism. The very fact of a few populous nations speaking languages so closely allied, having extended their dominion over nearly the whole peninsula, is a strong argument in favor of the antiquity of their civilisation, while its whole character leads to the inference that it was of Africo-Semitic origin. It is not necessary to discuss the question here whether the original population of southern Arabia, and even of the Semitic lands generally, was an extension of the African, or, in other words, whether the Semitic race did not descend from a tribe which spread by successive movements from the mountains at the head of the Euphrates into a Negro land and gradually eliminated the Negro physical element throughout that juxta-African portion of S. E. Asia which was Semitic at the dawn of history, that is of history as transmitted to us by one of the already severed sections of the Semitic race itself. Be this as it may, the E. African tribes on the Red Sea and for some distance to the southward, as well as the S. Arabian, must, at a very archaic period, have been intimately connected with the southern and original seat of Egyptian development. It may therefore be considered as in a high degree probable that the pro-Arian civilisation

of Southern India had a partially Egyptian character and that the Himyarites and their maritime precursors, on the coasts of the Indian Ocean, whether Semitic or African, carried the influence of this civilisation to India.*

It is probable that the lower and apparently the more normal southern type characterised the whole population of India at one period. Amongst the Vindhyans some tribes are found who seem to approximate to it, such as "the little ill-favored Tamarias" the neighbours of the Ho, and the short and jet black Surah who are spread for 200 miles from the hilly southern side of the basin of the Ganjam along the eastern face of the Ghats to the Godavery and are much inferior in civilisation to the Gangetic. The Chensuar,† who occupy the western portions of the continuation of the Ghats, between the Pennaur and the Kistna, and are probably a continuation of the Surahs, are described by Captain Newbold as having small and animated features, the cheek bones higher and

* In the introductory paper to this series (*Journ. Ind. Arch.* vol. IV. p. p. 420, 421, May 1850) I pointed out the decided African physical element in the S. Indian race and its affinity to the Papuas of South New Guinea and Torres Straits and to the Australians. I am not aware that any previous observer had adverted to this African element and I was led to mention it more prominently because both Prichard and Hodgson treated the S. Indians as purely Turanian. Dr Latham has since remarked the partially African character of the S. Indians. In his *Varieties of Man*, speaking of the physical appearance of the Tamil (by which he means not only the Tamil but the other Dravirian or S. Indian nations) he says "Lips often thick. Skull probably more dolichokephalic than brachykephalic. Maxillary profile often prognathic. The general physiognomy exhibiting many points common to the African." He does not refer to his authorities and does not, I presume, speak from personal observation. But this description is undoubtedly more accurate than Prichard's. Prichard thought that "we must seek the ingress of the Southern Indians" in the direction of Assam. (*Researches* Vol. IV. p. 247.) He adds "we have seen that the natives of the Rajmahal hills are said to have broad-faced skulls and a general resemblance to the Turanian races, and although we have very imperfect accounts of the physical characters of the aborigines of the Indian mountains, it is very easy to discover that the same characteristics prevail more or less in several of the tribes." In a note to this paragraph he says—"In many portraits of Tamulian and other Dravirian natives of the Dekkan, a certain resemblance to the Malay physiognomy may be detected. This may be noticed in the sculptures and paintings to be seen in the rooms of the Royal Asiatic Society of London. On the other hand the Tudas, of whom there are several beautiful paintings, are, as it may be observed, a people of fine European features." It is not safe to judge of the character of a race from a few portraits unless the subjects have been carefully selected as typical of all the prevalent varieties. It is probable that the Tuda portraits alluded to were those of Tudas selected because they had fine European features. From the notices of those who have visited them they appear to be more Semitic than European. Many Dravirians have undoubtedly a somewhat Malayan look, particularly when they are young and the bony outlines of the face are concealed. But the typical Malays and the typical Klings and Tamils are so different that to a resident in the Straits comparison seems out of the question. Probably the Dravirian heads that Prichard alludes to are of the class figured in Buchanan Hamilton's *Mysore*, Vol. III. p. 464 (heads of 3 sons of Tipoo Saib). These heads are not Malay, although those of the two youngest have some resemblance to the finer heads amongst the least Malay Indonesians. The characteristic South Indian mouth and nose of the third is not Indonesian. This head may be taken as one of the types of the Dravirians of the higher castes in boyhood. It is probable that the portraits to which Dr Prichard refers were chiefly of the middle and higher classes. He could not have seen characteristic heads of the lower castes without being struck with the Africo-Papuan pyramidal nose.

† ? Suar=Surah.

more prominent than those of the generality of Hindus, the nose flatter, and the nostrils more expanded, the eye black and piercing, the stature lower than that of their Telugu neighbours, the person light but well formed. He characterises them as being between a Telugu and a Jakun of the Malay Peninsula,—the most African and prognathous of the lank haired Indonesian tribes. The Chen-suar live in bee-hive shaped huts, like the African, Nicobarian and many of the ruder Asianesian tribes.

The western Ghats have preserved similar tribes. In the south the Kurumbar and Erular of the Nilgiri hills belong to the same race. In the north the Kuli, Ramusi, Berder, Warali, Katadi or Katkar tribes appear to be allied to it, but in general the African element has been eliminated. One of the most African of these petty northern tribes is the Katadi. They are of a deep black colour and Mr Vaupell describes them as being more like monkeys than any race of men he ever saw. The Warali are more slender and somewhat darker than the common Marathi.

The Bhils are the most numerous and important of the N. W. tribes. They are spread over the western part of the Vindyas, marching with the Gonds, from whom they are said to be strongly distinguished in person. Their southern limit is Punah. On the north they are found in the smaller hill ranges of Guzerat and Mewar. Anciently they were more widely spread and appear to have occupied many of the plains now in the possession of the Hindus. They can be traced as powerful communities as far back as the Mahabharat (Tod). Malcolm believed that their original seat was in the countries N. W. of Malwa, or on both sides of the Aravali mountains, including the S. E. portion of the head of the Gangetic basin and the basin of the Ban. The Doms and Rawats on the opposite side of the upper or N. W. plain of the Ganges appear to resemble them physically. The Doms of Kamaon are extremely dark, almost black and have crisp hair inclining to wool (Traill). The Rawats or Raji are another aboriginal remnant who wander in the forests, and Mr Traill thinks they belong to the same race as the Doms. Neither of the names are peculiar to Kamaon. A low class called Dom is found in many parts of India. Rawat is the name of another widely disseminated class. They appear to have been a knightly or equestrian order amongst the Bhils, and as there can be little doubt, from the position of Brahmavarta between the Bhils and Rawats, that the race dominated in the upper basin of the Ganges, and to the westward of it, before the Arians conquered and dispossessed them, the tradition of the Rawats which makes them descendants of one of the aboriginal princes of Kamaon, acquires some interest. The Dom may have been a servile and more ancient, or quasi-African class, even under the Rawats or Bhils, for each successive race that advanced into India as invaders would seek to helotise the previous dominant one, if greatly inferior in civilisation. The

Chumang, Chumar or Kholi of the adjacent Himalayan province on the west evidently belong to the same race. They are a degraded class, usually darker than the Kavit (or proper Kunawari) and some are said to have woolly hair (Cunningham.) It is probable that the race continued to possess the whole of the upper part of the Gangetic basin long after the Gangetic race had occupied the lower, and until the Arians of Aryavarta spread to the eastward. The Bhils have not been fully described. Where they are least mixed with the intrusive race, they are short, very dark, stouter than the Hindus, with thick lips, and the hair sometimes short and curly. The stock of the more civilised and famous Mahrattas was probably akin to the Bhil. With the exception of the Brahmans, they are dark, with broad, flat faces, small features and short, square, but spare persons. The superstitions of the Lony Mahrattas have a strong resemblance to those of the Bhils.

The Kuli of Guzerat and Baglana appear to be a branch of the same N. W. race, and it is probable that the Jat of Guzerat, Scinde and the Panjab, who are small, black and ugly, and the Jagdal of Beluchistan also belong to it. The Brahui are probably a link between this race and the true Scythian or Semitico-Scythian races beyond. From the wide range of this race to the N. W. and their decided contrast to the Tibetans on the north and the Ultraiadians on the east, it is probable that their stock was originally an extension of a western or north-western Scythian or Semitico-Scythian race that preceded the Arians and Semitico-Arians in Beluchistan, Afghanistan and the Panjab. They were evidently the N. W. population of India before the Arians advanced into it. If the stock was mainly Scythian it was probably considerably modified by the more ancient and African basis of the Indian population.

From the important part played by the horse in the historical legends of the Bhil and the use of a brass image of a horse or bull in the ceremonies upon the death of a chief, it may be conjectured that they were equestrians when they had the dominion of the plains. One of their famous heroes is Kunda Rana, who, with his brothers and their sons and relatives, formed a family of sixty Rawets or Knights who are now worshipped as Hill Gods. They have idols around which they often arrange mud figures of horses. Their neighbours, the Ghonds, have two wooden pillars as idols, on one of which is carved a rude representation of the sun and on the other the sun, moon and a horse. Whether or not the race of the Bhil and Mahrata were horsemen, when they entered India, as appears probable from the prevalence in India of pre-Arian names for the horse, it may be considered as certain they were the sole race of the north-west, and probably the predominant one in the south also, when the Arians crossed the Indus. Affinities in persons, customs and language connect ancient India with the Scythian races and as the southern boundary of the latter has immemorial-

ly approached the upper basin of the Indus, and has crossed it more than once since India was Arianised, it may be further assumed as probable that the latest great Indian formation, prior to the Ultraindian and Arian, was Scythic, that the Scythic area included India although the race was then modified by others, and that the eastern migration of the Arians broke the continuity of the Scythic range, and isolated the southern section before it had completely transformed the older Indian race.

The other Indian races are the Arian, the Tibetan and the Gangetic. The former is characterised, in its purer forms, by height and symmetry, an oval face, a prominent and well shaped nose devoid of the open nares which characterise the Africo-Semitic type, and with the ridge continued till it passes into the forehead, the lips and cheek bones not prominent, the eyes expressive and moderately large, the eye-brows arched, and the forehead high.

The Tibetan type is Turanian, of the obtusely ovoid variety. The eyes are somewhat larger and less oblique than in the Chinese and far apart as in the Mongol, the supra-orbital ridge large, producing a heavy eye-brow, the upper jaw slightly but distinctly prognathous, the thick lips consequently protruded so that in the side view the upper lip is nearly as salient as the nose, the zygomæ prominent, both laterally and anteriorly, and angular or square (not rounded as in the Chinese, Esquimaux &c.), the lower jaw large and with the angles as prominent as the zygomæ, the face large, broad and full, the occiput protuberant and swelling out laterally as in the Ultraindian and allied insular tribes, the ears large and prominent, the person massive and remarkably tall, with long trunk, and muscular development of limbs.*

The Kham or Kham-pa of Eastern Tibet and the adjacent Chinese provinces appear to be allied to the Mongols, the ancient West Chinese and the Ultraindian tribes, more closely than to the middle and western Tibetans. We have no exact physical description of them, but Captain A. Cunningham informs us that those he saw in Ladakh, for they wander over all Tibet, were of low stature, the men being generally from 5 feet to 5½ feet and the women from 4½ to 5 feet. They were stout, square, flat faced, small eyed, large eared and of a deep brown complexion (J. A. S. 1848,

* Hodgson J. A. S. XVII. 77; Prichard—Ib. Part II. 580. Prichard says the occiput is "not truncated as Retzius thinks it is in the Tartar races". In many of the Ultraindian and insular tribes it is generally at once truncated behind and expanded at the sides and top. Hodgson does not describe the occipital characters particularly, but as he says the head is "well formed and round" it is clear that the flatness observable in so many other Turanian races is absent in the Tibetans. Prichard says the *general aspect* of a skull examined by him (and which Mr Hodgson says was a typical Tibetan one) was like that of a Chinese skull. The prognathous upper jaw and salient lip is a marked Malay feature which is even found in the refined Polynesian type. Captain W. C. Hay, describes the Bhotias of Spiti as a physically robust cast of people, with strongly marked, weather-beaten countenances, of middling height, with muscular bodies, flat faces and noses, and, in general, small eyes, the skin of a light brown colour with a ruddy hue derived from the reflection of the sun from the snow. The smallness of the eye is particularly mentioned by observers in other localities, as in Butan.

p. 225). The Tibetans appear, in some respects, to be intermediate between the northern or taller and handsome branch of the Chinese family and the coarser and smaller Mongol and Malayu-Ultra-indian type. Their great breadth of head, coarse angular features, prominent ears, projecting upper jaw and lip belong to the latter. In person they differ so notably from the more southern of the west Chinese, and from the adjacent Mongol, Kham-pa Gangetic and Ultraindian tribes, that we are led to surmise they have been crossed by some superior race, particularly as the Tibetan linguistic formation appears at a very ancient period, and while it was still monosyllabic, to have been carried into Ultraindia by the Burman or North and West Ultraindian race. The only Turanian race capable of improving the Tibetan stock, that is likely to have advanced into the Tibetan province at a very remote era, is the N. E. Asiatic, or that with which the N. Chinese, some of the Tangusian tribes, the Japanese, the predominant American tribes and the finer type of the Malayu-Polynesians appear to be connected. The latter however is very mixed.

I subjoin the general comparativs remarks I have already made on the Chinese,* and it is only necessary to remind the reader that the Chinese are an amalgamation of several distinct nations which still retain distinct languages. These nations differ very considerably in their physical characters, although much mixture has taken place. The northern or predominant nation appears to have a fundamental tendency to an Iranian modification of the Turanian type, and the same tendency is observable amongst the Koreans and the higher classes of the Japanese as amongst some of the American, Tangusian and Asianesian peoples. In the south

* "The middle Turanian is intermediate between the N. E. and the S. E. In the latter the oblong and ovoid prevail, the zygomæ are less projecting, and the face much less lozenge shaped and more rounded, but the degrees of the Turanian characteristics vary greatly even in the same race and harsh features are found in many of them, just as amongst the Mongolians softened and rounded varieties are frequently seen. Amongst the Chinese and Japanese the oblong form prevails, and amongst the Tibetans, Indo-Tibetans, Anamese and many of the Indonesian races, the ovoid. The most striking peculiarity in the Chinese is the smallness of the eye and oblique position of the eyelids, which makes the eye appear to be half veiled and much inclined. The opening between the eyelids is often very narrow, and the tumid eye, instead of opening boldly, peeps out with a half cunning, half timid, or dull and wholly inexpressive, character, from behind the heavy and down hanging upper lid. The cheek bones are prominent, but in general much less so than in the Mongolian, and in the elongated heads the prominence is anterior rather than lateral, as is the case with the American Indians, and some of the Tangusian tribes. The nose is in general small and depressed, the alæ diverging and often so much rounded and thrown out as to make the nostrils circular and quite open or exposed. But besides this flat Mongolian nose, a small aquiline or long and slightly arched nose occurs frequently, giving the face a most striking resemblance to the prevailing American Indian and New Zealander type, which also characterises some of the S. Indonesian tribes to whom the latter are allied." (*Jour. Ind. Arch.* IV. 449.) It should have been added that in the northern Chinese the eye is often comparatively fine or sufficiently large, brilliant and with little obliquity. In the paper from which the above is extracted I have used the word Bhotia in the popular sense of a native of Bhutan, or generally for the cis-Himalayan, Bhot or Tibetan.

of China the fundamental tendency is to an extreme flatness of features, the nose being often more insignification and shapeless than in any other race, although the finer type also occurs. In the eastern maritime provinces the northern type is much more common.

The tribes of Ultraindia vary greatly in their physical character, but at the same time, certain common tendencies are observable in nearly all. The most remarkable is a disposition to shortness of stature. This trait cannot have been derived from the proper Tibetans or Chinese. The Tibetans are a tall race and the Chinese are of middle stature. The Lau on the borders of China differ little from the Chinese of Yunan and their stocks was probably the same. Where they are in contact with the older races they have considerably altered. In the valley of the Menam their height is about 1½ inches less than the average Chinese, but as the average stature of the French is the same (5 feet 3 inches) the Siamese may still be considered as of the middle size. The Anam are smaller and instances of men under 5 feet are common. The Burman and Malays are somewhat shorter than the Siamese, the average height being probably about 5 feet 2 inches. Most of the wilder tribes are short. The average height of the Simang and Andamani appears to be under 5 feet. As a similar *negrito* race is found in several parts of Asianesia and the wilder tribes of India are also in general very short, it may be concluded that one variety at least of the oldest race of India, Ultraindia and Asianesia was distinguished by a similar deficiency in height, and that it partially communicated this characteristic to those tribes of the successive intrusive races who have long remained in contact with them, although the stature of the Kham-pa and Mongols renders it probable that the Tibeto-Ultraindian race were from the first small and squat. The oldest race of Ultraindia was further marked by blackness of colour and a tendency to spiral hair. In the remoter portions of Asianesia some of the black tribes possess all the traits of the Guinea negro, but the Simang and Andamani appear, like the greater number of the Asianesian negro tribes, to have been partially modified by mixture with other races. This is certainly the case with the Simang, some of whom are Australo-Tamulian in appearance, while others differ little, save in their frizzled or spiral hair and dark complexion, from some of the adjacent Binua.* The notion that such tribes are exempt from

* As the Simang characteristics do not appear to be well understood, the following notes, which have reference to a party of Simang Bukit on the Ijau, a feeder of the Krian, will not be out of place here. Average height of adults 4 feet 8 inches; highest 4 feet 10 inches. Head small, ridged, that is, rising above forehead in an obtuse wedge shape, the back rounded and somewhat swelling; the forehead small, low, rounded and markedly narrower than the zygomatic or middle zone; the face generally narrower and smaller than the Malay; eyebrows very prominent, standing out from the forehead and projecting over the ocular furrow which extends across the face, the root of the nose sinking into it and forming a deep angle with the base of the superciliary ridge; the nose short and somewhat sharp

the influences of mixture of blood, even when surrounded by other tribes, is erroneous. The lank haired races of Ultratindia present several well marked physical types. They are all normally Turanian, but the heads of some are large, elongated, or square (Siamese, Malays), those of others are small, obtusely ovoid or orbicular (Anamese, Nagas), while some, on the contrary, have the expansion the other way, the face being very broad and the forehead very narrow (Binua). The eye is generally small but in many of the Burmans it is comparatively large. The nose is slightly arched in many Burmans and a similar tendency is found, in a less degree, in the Siamese, but in general it is flat and at the extremity rounder more often than spreading. In some the profile is nearly vertical like the occiput (Siamese) and in others it has a decided prognathous tendency (Kha, Anamese, Binua tribes, Simang, some Malays). The head frequently bulges out at the sides. I have parenthetically mentioned the tribes in which examples of these different types are most abundant, but in every tribe there is a great range of variation. The Burmans and Malays, in particular, are very inconstant. Their heads vary from the finest form which the Turanian skull can assume without ceasing to be Turanian, to the half Mongol, half Negro type which is common amongst the Kha and Binua. The Anam race differ so decidedly both from the Chinese and the

at the point, and often turned up, but the alae spreading; eyes fine, middle sized and straight, iris large, black and piercing, conjunctive membrane yellow, the upper eyelashes, owing to the deep ocular depression or prominent ridges, are compressed or folded, the roots of the hair being hidden; the cheek bones generally broad but in some cases not remarkably prominent, save with reference to the narrow forehead; mouth large or wide, but lips not thick or projecting; the lower part of the face oval or ovoid, not square. The deep depression at the eyes and sinking in of the root of the nose gives a very remarkable character to the head compared with the Malay. The projecting brow is in a vertical line with the nose, mouth and chin, and the upper jaw is not projecting or prognathous. The person is slender, the belly protuberant, owing to their animal life in the jungles and precarious food. This induces them to cram themselves whenever they can, and the skin of the abdomen thus becomes flaccid and expansible like that of an ape. The skin generally is fine and soft, although often disfigured by scurf, and the colour is a dark brown but in some cases lighter and approaching to the Malay. The more exposed hordes are black. The individual who, many years ago, was brought to Pinang and who has hitherto represented the race in European ethnology, probably belonged to such a horde. His lips were thick and Mr Anderson says he exactly resembled two natives of the Andamans who were brought to Pinang in 1819. Mr Anderson adds that a Sinang of Tringanu, who lived in Pinang, was "not of such a jet black glossy appearance" as the Simang from Kidah whom he saw and the two Andamau. (Jour. Ind. Arch. vol. iv. p. 427.) The hair is spiral, not woolly, and grows thickly on the head in tufts. They have thick moustaches, the growth being much stronger than the Malay race. The head is neither Mongolian nor Negro of the Guinea type. It is Papua-Tamulian. The expression of the face is mild, simple and stupid. The voice is soft, low, nasal and hollow or cerebral. A line of tattooing extends from the forehead to the cheek bones. The adjacent Binua also tattoo. The practice is Indian (Konds, higher Abor tribes &c.), Ultratindian and Asianesian. The right ear is pierced, the orifice being large, but they do not pierce the septum of the nose like one of the adjacent Binua tribes of Perak and many of the Asianesian Papuas. The hair is cropped, save a ring or fringe round the forehead.

Siamese that as the latter appear to be of undoubted South Chinese derivation (Yun-nan being their native country) I think the Anamese cannot be directly connected with the N. E. part of Ultraiidia or Yun-nan. It is probable that they spread across Ultraiidia from the west or north-west long before the Siamese had descended from Yun-nan. They want the large straight faces, flat occiput, lowness of the hairy scalp, comparatively small and firm mouth, hard staring eye and grave expression of the Siamese, while their ovoid and orbicular heads point to the Eastern Tibetans and the more Tibetan tribes of West Ultraiidia for their nearest physical affinities on the continental side. But in size, form of the head and person, expression and temperament they have a much closer resemblance to some Indonesian tribes. The Javan group has a larger admixture of the Anam type than the Sumatran or Borneon. Anam heads are common in eastern Java and especially amongst the Bawians and Madurans. The Malays and Western Javans have frequently a more Siamese form. There is also a large and important class of Indonesians, spread over Celebes, the Trans-Javan or Timorian band and the Moluccas, which graduates between this type, the Burman and the Negrito. The most prevalent head, or that of the predominant race, is ovoid, but it is somewhat Burman or Indo-Burman in nose, eye and colour.*

The Burmans differ from the Anamese in being stouter and darker, and in the head being Daya-Polynesian or Turanian oval, if I may use the expression, and not obtuse ovoid. The comparatively large, dark, liquid eye and soft expression are East Indonesian, but the Anamese eye is also well distinguished from the Chinese. The head varies greatly, as amongst the allied Indonesian and Polynesian tribes, and unlike the Anam-Bugis type, the coarse forms shew a tendency to the Binua contraction of the forehead, rendering the lateral expansion of the zygomata very marked. The normal or non-Indianised Burman head appears, in many respects, to resemble the coarse Sumatran, Javan, Borneon and Polynesian. This softened Turanian type is decidedly allied to the oblong, square and oval Chinese type and not to the ovoid and orbicular type of the Tibetan, some of the Himalayan, Gangetic, the Anam and the Celebesian tribes. The Siamese may be considered as a remarkable modification of the Burmah-Chinese head, with a peculiar tendency to elongation and verticality. But it must be recollected that the numerous ancient tribes that occupied southern and south-western China before the proper Chinese spread into it, and of whom undescribed remnants still exist, may supply links between the Chinese and the Siamese.

* As there are no pure races amongst the Malayu-Polynesians, I must ask the reader not to draw any positive ethnic inferences from these comparisons, until I lay the physical characters of the Asianic races fully before him in the proper place.

The improved eye, however, may be safely set down as an Ultra-indian acquisition, for it is neither Chinese, Tartar nor Tibetan. Although the Malays are frequently quite Burman, yet, taking the proper and least mixed Malays as a whole, they are more Binua and also more Siamese than the Western Burmans. The typical head is distinguished by the expansion and elevation of the occiput. In the front view it bulges out beyond the forehead. In the side view the point where the nearly flat or straight upper and back lines meet is carried out very remarkably so as to make the occiput more angular than convex. The Western Burmans more often resemble the handsomer Asianesian tribes found in Borneo, some parts of East Indonesia and Polynesia. Similar tribes appear to have preceded the Malayan race in Sumatra, for they have left their impress, to a certain extent, on the Nias and some of the Batta tribes. Even in the Peninsula, neater, lighter and handsomer men than the ordinary Malay are not infrequent amongst some of the Binua tribes. I attribute this great discordance, partly to the tendency which even the purest types have to a certain range of variation, but, in a much greater degree, to the mixture of blood that has followed the advance into Ultraiidia and Asianesia of the great races that have successively played an important part in its ethnology. The Turanian tribes that moved into Ultraiidia from the N. E. were first modified by the native races of the Papua and Dravido-Australian types. They have ever since continued to be modified by the races of India. The influence of the change which the western races of Asia produced on the Dravirian and Gangetic tribes was early felt in the Irawadi also. It should be remarked that the dominant or northern Chinese race is much less Mongolian than the S. Chinese, the Malay and most of the intermediate Ultraiidian races. They are closely allied to the Japanese and Americans and indeed are evidently the same race, however much the languages differ.

All the leading races of Ultraiidia, after the Papuans, appear to have advanced into it from the upper basins of its great rivers. The western provinces of China and the eastern portion of Tibet must always have been the great hive from which they came forth, and the pressure of the Chinese civilisation and race, as it gradually extended itself to the southward and westward, has probably been the main standing cause of the irruptions of fresh tribes into Ultraiidia. In the lower river basins and on the coasts, they have mixed with Papuan and Indian races. The varying Indian element has necessarily always been powerful towards the head of the Bay of Bengal. The Mons appear to have been considerably modified by it, and the Rakhoings, or Burmans of Arrakan, in a greater degree than the Burmans in the valley of the Irawadi or even than the Mons.* The published descriptions

* The Mugs are a highly Bengalised class of Rakhoings. They call themselves Myama-gzi or great Myamas (Phayre). Is the word Mug which has so often

of the various tribes of the Irawadi are in general very vague and I have not been able to obtain information sufficiently exact for ethnic purposes from actual observers. My friend Mr O'Riley, who has enjoyed favourable opportunities for comparing the Mons, Burmans, Karens, and Toung-thus, thinks that the first are only distinguished from the second by their less Mongolian and more Rakhoing aspect. The Karens are smaller than the Burmans and I suspect must differ considerably in different places. Mr O'Riley thinks they are not more Arianised than the Burmans. A writer in the Calcutta Review says "they are, as a race, handsomer according to European notions than the Talains (Mons) or Burmans" whom he describes as "ill favoured" and with "Tartar countenances." The Toung-thus Mr O'Riley considers to differ very perceptibly from the other races of the Irawadi and to resemble the Anamese. This remark is important, because it tends to connect both the Anamese and the Toung-thus with some of the western tribes of the Irawadi, such as the Nagas. It must be remarked, however, that the dress, which appears to be partially Anamese would give a somewhat Anamese aspect to the Toung-thus, which would be apt to deceive an observer unless he could compare them with Anamese on the spot. Islamised Chinese who adopt the Malay dress and habits, are often set down as Malays by those who do not critically examine their features. The writer in the Calcutta Review, speaking of the Toung-thus, says "In Amherst province a portion of the people are Toung-thus, they are the best cultivators in the province, being the only people who understand the use of the plough. Distinct from the Talains, Burmese and Karens by language, dress and habits, their original country is not well ascertained; the name implies a hill man, and the use of a plough with a metal blade argues a higher country than the plains of Pegu, and a soil which requires a more laborious culture than has been forced upon the people of the land of their adoption. Their pipes, their dresses and their minor peculiarities indicate a more ingenious people; but their language and its literature remains unmastered by Europeans, and therefore little or nothing is known of the race except that they are esteemed good cultivators." The Anamese dress is the ancient Chinese one. The unpicturesque Mongolian costume and tail were imposed upon them by their conquerors, but the Anamese have retained the old fashion, and the Toung-thus probably received their habiliments, with their arts, from China, as the Anamese did theirs.

The other Ultraindian tribes to the west of the Irawadi, the Bong-zu, Kuki &c belong to the Burman family. They are of the coarser or normal type, the features being less prominent than in the Burmans generally. The Kyens of the Zuma range have

puzzled Burman and Bengali scholars, not a contraction of the last portion of this name *magzi*?

also flatter and less regular faces than the Burmans. The Kyau are probably a remnant of an early and much Indianised Mon tribe of Arrakan, now nearly absorbed linguistically into the Burman family. The Singpho of the Upper Irawadi are Burman, and so also are the Mishmi, to all appearance. Both in the Irawadi and Mekong basins there are remnants of tribes strongly distinguished from the predominant races, and tending, with the evidence of language, to shew that the ethnic history of Ultraindia is very ancient and has undergone repeated revolutions. One of the most remarkable is the Ka-Kyen. They are described as being in their appearance not Mongolian, and totally different from the surrounding races, Shans, Burmans, and Chinese. The Pa-long appear to resemble the Anamese in some respects. A race of the same name (Pa-nong), but to which the Siamese apply the generic term Ka or Kha, inhabit the mountains of Laos bordering on Kamboja. They are a coarse and debased variety of the Anam and the Kambojan type. On the same side of the Mekong basin but towards the sea between 11° and 12° N. L. a hill tribe called Chong preserve more of the ancient Australo-Tamulian character than the surrounding tribes. The language it may be remarked in passing, is Mon-Kambojan, like the Ka, and has some western affinities (Mon, Simang, Binua) which are not possessed by Kambojans. This of course merely speaks to the prevalence of a predominant linguistic formation and civilisation in Ultraindia, prior to the Lau and Burman. It does not answer the question with what race this formation originated. In the Chong, the hair instead of being stiff or harsh as in the Mongolian, Tibetan and prevalent Ultraindian and Malayu-Polynesian race, is comparatively soft, the features are much more prominent and the beard is fuller.

The Moi or Ka-moi, who on the opposite side of the Mekong occupy the broad expansion of the Anam chain towards Kamboja and appear to extend northwards along these mountains marching with the Lau on the westward, are said to be black savages with Negro features, but no exact notices of them have yet been published* nor have I been able to procure any definite information about them from the French missionaries or from Kambojans and Anamese of whom I have made enquiries. Those within the present limits of Kamboja appear, from Constantine Monteiro's replies to my questions on the subject, to be only uncivilised Khamer, for such is the native name of the Kambojans and not Khomen (Leyden) nor Kha-men (Gutzlaff). The Muong or Muang who inhabit the same mountains further north, or on the West of the Tonkinese province of Thanh-Hoa-Noi, and stretch into China, are evidently an extension of the aboriginal or uncivilised Lau of Yun-nan. The name is the Lau term for town or village, which

* See Bishop Miche's notices. J. I. A. vi. p. 178.

is scattered over so large a portion of the Chinese maps of Yunnan, indicating the present limits of Lau in that province.

The stock of the Nicobar islanders appears to have been an early colony of the Mon race in its pure or more West Chinese and less Indian condition. They are flatter-faced and more oblique-eyed than the Rakhoings and Mons, in this resembling the more sequestered hill tribes of the Burman race. In some islands they have been much mixed with Malay colonists. Further remarks on some of the northern tribes of Ultraindia will be found in a subsequent section, but to enter on their physical characters fully would be to forestall the details appropriated to another paper. One general remark however it appears necessary to add. Each widely spread tribe, such as the Burman, Siamese and Malay, varies in different districts, partly owing to variations in purely physical environments and mode of life, but mainly to contact with different races. Thus the Shans of Yun-nan differ from the Siamese of the Malay Peninsula; the Burmese of Arrakan, who have been modified by Bengali blood, from the Burmese of some parts of the Tenasserim Provinces, who have been modified by Siamese, Chinese and Malays; and both from the Burmese of the upper Irawadi. The half Binua and half Simang Malays of some parts of the Peninsula cannot properly be considered as of the same race with the purer Malays of the Sumatran highlands, while both of these short, squat and Mongolian varieties, differ extremely from the tall and handsome class found in all the sea ports, and about all the courts of the Archipelago, and whose fine eyes and well shaped features betray the presence of Arab or Indian blood. At the southern extremity of the Peninsula the confusion of race is very great, independent of the modern influence of the mixed community of Singapore. The Malays there are Bugis, Ryat and Malaccan (i. e. Kling-Malay, Chinese-Malay, Binua-Malay &c.,) much more than pure Malay. In fact it is difficult to find any proper Malays save in large inland communities, and if some ethnologists who have written on the Malay race and the Malay language had begun by asking themselves what they meant by the word, they would have saved themselves and their readers some confusion of ideas.

The Ultraindian races in their fundamental characters, physical and mental, and in all their social and national developments, from the lowest or most barbarous stage in which any of their tribes are now extant to the highest civilisation which they have attained in Burmah, Pegu, Siam and Kamboja, are intimately connected with the predominant Oceanic races. The tribes of the Niha-Polynesian family, who appear to have preceded those of the Malayan, resemble the finer type of the Mons, Burmans and the allied Indian and Himalayan tribes.* The Malayan family

* The question whether the Micronesians and Polynesians have a north Chinese

approximates closely to the ruder or more purely Mongolian type of Ultraindia. The identity in person and character is accompanied by a close agreement in habits, customs, institutions and arts, so as to place it beyond doubt that the lank haired population of the islands has been received from the Gangetic and Ultraindian races. The influx of this population closed the long era of Papuan predominance and gave rise to the new or modified forms of language which now prevail. The ethnic distance between the Polynesians and the Javans or the Mons and the mere language and geographical position of the former, attest the great antiquity of the period when the Ultraindian tribes began to settle in Indonesia. To enter here on the ethnic characters common to the Dravirian or ancient Indian, the Gangetic and the Ultraindian with the insular tribes, would be to anticipate almost the whole of the ethnology of both provinces. In the meantime the reader may if he thinks fit refer to the general remarks on the subject which he will find in my introductory paper.*

I have reserved the North Eastern or Gangetic race of India to the last, because I think an examination of the surrounding races, Ultraindian, Tibetan, N. W. Indian and S. Indian, proves that they are a mixed race, most closely related to the adjacent Ultraindians, but variously modified by all the conterminous races. As the ethnic connection of Asia with India is chiefly through this race, I will describe their distribution and glance at their customs when it seems necessary to elucidate their history.

The Gangetic tribes may be divided into three classes, the Northern or Himalayan, the Central or Lowland and the Southern or Vindyan. I shall notice them in the above order.

The Mishmi who occupy the mountains at the head of the Assam valley are connected with the Abor tribes on the west, the first proper Himalayan tribes, and both believe themselves to be of the same origin. Physically the former have a considerable resemblance to the latter but they are distinguished from them and from the Tibetans by their short stature. As they are in contact with these tribes on the west and north, it is not probable that so great a contrast would exist in stature if they were derived from them. Their features have not been described with any exactness. Dr. Griffith says the Mishmi are small, active and hardy, with a

or Japanese physical element will be discussed in another place.

* Jour. Ind. Arch. vol. iv. 331 *et seq.* "Whoever first makes himself tolerably well acquainted with the various lank-haired inland Asianic tribes that have been least affected by Hindus and Mahomedans [i. e. Indians and Arabs], with their characters, physiognomies, habits, modes of life, arts, religions &c., and will then proceed to the ethnology of the simpler Ultraindian and Tibeto-Indian [Gangetic] tribes, rejecting all Buddhistic elements, will hardly perceive a transition. Not less strong is the connection between the later Indonesian civilisations, maritime and agricultural, and the later civilisations of Ultraindia."

Ib. p. 332. The identity in race habits and civilisation is in fact so manifest, that it hardly belongs to ethnology. The only questions requiring ethnological research for their solution are those arising out of the linguistic contrasts.

Tartar caste of features and very thick legs from their great muscular development. Lieutenant Rowlatt does not describe them, but the Tibetan visitors whom he saw when amongst them, seem to have struck him as being a different race, for he says they were tall, fair and with much resemblance to the Chinese. There cannot be much doubt, I think, that the Mishmi are not of the Tibetan but of the Irawadi branch of the Tibeto-Burman alliance. If the Abors in any respect resemble them more than the Tibetans, the modification is probably attributable to the influence of the Mishmi or other tribes of the same family with whom they have intermixed.

In manners and customs the Abor, Mishmi, Singpho and Nagas greatly resemble each other and differ from the Tibetans. These common traits must belong to an ancient civilisation that embraced the basins of the Brahmaputra and Irawadi at the least.

The next tribes to the west are those known in the valley of Assam by the descriptive names of Bor (i. e. hostile) and Abor (non-hostile). A branch of the race called Miri have partially descended into the valley. The Abors appear to be of Tibeto-Burman origin. Judging from descriptions and figures, the Tibetan physical element is now the stronger. From the Burman character of the population at the head of the valley, and the Utraidian affinities of the language and customs of the Abors, it is probable that their country, or at least the lower portion of it, was inhabited by tribes allied to the Mishmi before Tibetans moved into it in sufficient numbers to give a Tibetan character to the population. At all events, the Tibetan element, both physical and linguistic, is much stronger than it is to the east and south. The Abors are frequently remarkably tall, a Tibetan trait. The women appear in general to incline more to the Burman type, being short and stoutly built, but with exceptions on the Tibetan side. The head is Tibetan much more than Burman. The almond shaped eye is common. The customs, on the contrary, are Utraidian more than Tibetan, although much mixed. Their civil, religious and social institutions are, in general, similar to those of the Mishmi, Singpho, Naga, &c. The bachelors live in the *murang* or public hall. Their personal ornaments, their weapons, helmets, shields, cane rings for the legs &c., are similar to those of the Naga. Tatooing does not prevail amongst the Abors, but it is preserved by their more civilised neighbours the Tanas or Anka Abors, and it appears to be practised by some other tribes higher in the mountains. The Abors have added to the ancient Asamese and Utraidian fashions several modern Tibetan ones. They carry on an intercourse with the Tibetans, from whom they receive metallic cooking vessels, beads, &c.

Of the tribes between the Abors and the Lhops very little is known, but they appear to be still more Tibetan. Physically the

Akha (or Anka) do not appear to differ from the adjacent Lhops.

The other languages of this tract are unknown, but the strong Tibetan tendencies of the Abor, and the Tibetan character of the Akha and Daphla people, make it probable that they will prove to be still mere Tibetan.

The sub-Himalayas comprised in Bhutan, Sikim and Nipal are chiefly occupied by Tibetan or Bhotia tribes and by tribes of a character more akin to the Gangetic race.

The Bhutanese, Lhopa, Dukpa or Brukpa are an undoubted branch of the Tibetans, in form, customs and language, although they differ slightly from their trans-Himalayan relatives. True Tibetans or Bhotias are also spread over the higher habitable band of the mountains, from Bhutan to Kumaon, or from the Dhansiri to the Kali. They are called Ronpo, Siena or Kath Bhotia, Serpa, &c. Of the other tribes, the Lepcha occupy Sikim; the Kiranti and Limbu, the Nepalese districts east of the great valley (the basin of the Kosi); the Murmi and Newar, that valley and its vicinity; while the Magar, Gurung and Sunwar were, until last century, confined to the west of it, but the Magars and Gurungs have been spread to the eastward by the conquests of the Gorkha, who are of Magar derivation. There are also some remnants of other tribes, as the Hainu, who live amongst the Eaka Limbus, the Chepang and the Kusunda, who wander in the forests of central Nipal, to the west of the great valley.

Beyond the Kali, or in Kumaon, the Tibetan element is absent, but in Bisahir it is strong. Tibetans occupy the higher tracts. The principal race below, the Kinawari or Kauti, are physically Arians, but they are Tibetan in disposition and manners. The languages are the Mulchanang and Tibberkad. The Chumar or Kohli of Kinawar are a distinct and degraded class, darker than the Kauti, and some are said to have woolly hair. Captain Cunningham thinks it probable that they belong to the ancient Sudra or pre-Arian race. I have already alluded to an apparently allied class called Dom who are also located in Kumaon.

The language of Bhutan is Tibetan like the race, but it has some dialectic peculiarities. In the north it differs little from that of the adjacent trans-Himalayan stock. According to Captain Pemberton, four distinct dialects prevail in Bhutan which have so much dissimilarity that the corresponding divisions of the people can with difficulty comprehend each other. These are called the Sangla, Brambi, Gnalong and Bomdang. The Sangla is spoken south of Tassgong, the Brambi in the north and as far west as Tongso, and the other two beyond it to the west. The Sangla are mentioned as one of the three inferior classes of the Bhutan population, the other two being the Rangtang and Tebula. As these classes are not eligible to the higher offices of government,

which are monopolised by the Wang, the Kampa, the Bhutpa and the Kushi it is probable that they are remnants of the pre-Tibetan tribes of Bhutan and were originally of the same stock with the adjacent Abor &c. that is of the Gangetic race, although they have become assimilated to their Tibetan conquerors. The names confirm this. The Kam-pa or Kham-pa are properly the Eastern Tibetans, but this nomadic tribe is spread widely over Tibet and a portion of China, and the name is also applied in Bhutan to the adjacent division of Tibet to the south of the Tsang-po.* Wang is a Chinese title equivalent to *Regulus* which has been adopted in Tibet. The Bhutan class who bear it are probably the descendants of the family of the original Tibetan rulers during the Tsang dynasty. Whether Tibetans previously formed a considerable ingredient in the population of Bhutan is not historically known, but it is certain that at that period, or from the 7th century at the latest to the commencement of the 10th century, the Tibetans extended their dominions along the whole length of the Himalayas and into Kashmir at the one extremity and Assam and Bengal at the other. Bhutan from its proximity to the central province and the capital, and from the trading route between China and Bengal lying through it, was probably early occupied and became so completely Tibetanised, that it may be considered as having advanced not only the political but the ethnic frontier of the nation nearly to the plain of Assam and Bengal. It is probable from this that it was chiefly from Bhutan that Tibetan influence was extended over the tribes of the lower Ganges and the Brahmaputra during the era of Tibetan power. When Bhutan ceased to be an integral portion of Tibet does not appear. The palaces and castles of the provincial governors are still standing, although the Lhops have long been left to govern themselves (Pemberton.) The eastern extremity of the Bhutan of the maps is still under a separate government directly subordinate to Lhasa. There can be little doubt that it was chiefly during the occupation of Bhutan under the Tsang that the Tibetans dislodged, absorbed or modified the ancient population, although they probably first spread into it long before. To the same period must be referred the modern influence which Tibetan has exerted on the Gangetic languages. Bhutpa is equivalent to Tibetan. The *Rang-tang*, a term evidently identical with *Rang-tsa* (Kachari), are probably of the same stock as the Lepcha of Sikim, whose proper name is *Rong*,—*tang* and *tsa* being mere definitive postfixes, and *Rong* or *Rang* being a Tibetan word signifying Low-lands. *Rong-bo* or Lowlander is the name applied by them to the Bhotias or Tibetans on this side of the Himalaya, and it appears to have been applied by the early Tibetan conquerors to some or all of the Gangetic and Tibeto-

* Were the inhabitants originally Kam-pa and not Tsang? The present royal family of Sikim is a Kam-pa importation.

Gangetic tribes as a generic title. The Rong or Lepcha are known to extend from Sikim into Bhutan, being found as far as Tasgong. The Sang-la and Tebu-la are probably allied to the Rang-tang. The Sang-la are evidently no other than the Chang-lo of Mr Robertson. They appear from his brief description to be more Gangetic and less Tibetan than the adjacent Himalayan tribes. He says "they are smaller, less muscular and the hue of their skin possesses a deep isabelline tint, from which latter circumstance probably they derive their appellation; the term *Changlo* signifying *black*." In the south this dialect is spoken from Binji to Kuriapara Dwar or from the Manass to the N. Dhansri. The Tebu-la are probably the Thep mentioned in the 15th volume of the As. Res. p. 129, as the remnants of the native Kocch population. According to the account there given, the Lhops have a tradition that Bhutan, or at least the eastern portion of it, was occupied by Kocch and governed by a Kocch raja before they entered it.

All the Tibeto-Gangetic languages of Nipal have much in common, and they appear to be all normally of the Gangetic family but deeply modified by Tibetan influence. Mr Hodgson considers the tribes themselves to be all of Tibetan origin. According to him their legends indicate a migration from Tibet "from 35 to 45 generations back, say 1,000 to 1,800 years." He prefers the remoter period "because the transit was certainly made before the Tibetans had adopted from India the religion and literature of Buddhism in the 7th and 8th centuries of our era." From the descriptions of the Nipalese tribes that have been given by Kirkpatrick, Buchanan Hamilton, Hodgson, Cunningham and others, I have been led to adopt a modification of Mr Hodgson's opinion. Several of these tribes appear to resemble the middle Gangetic tribes, such as the Bodo, and others the southern or Vindyan, much more than the Tibetans. This region appears to present the same ethnic phenomena that are found to the eastward. Tibetans have descended into the lands of the Gangetic race as conquerors, exclusively occupying the higher and colder region, and in the lower, mixing with the natives, and modifying their persons, languages and customs. The period when this great Tibetan irruption commenced was no doubt nearly the same throughout the whole Himalayan range and Mr Hodgson's conjectural date, founded on the Himalayan traditions and apparently without advertence to Tibetan history, falls within the era of Tibetan predominance. The precise time when this race first began to extend their dominion widely is not ascertained, but it must have been subsequent to the dispersion of the Huns or Turks in the third century, because that race predominated for 2,000 years before in the eastern part of the great Plateau. In 313 B. C. the four chief Tibetan tribes, Ngari, Dzang, H'Lassa, Wei or U and Kham were, for the first time, united into one state. In the 7th

century its sway had extended from Kashmir on the one side to the Ya-long on the other. It continued to flourish for some centuries, frequently waging war on China and compelling the emperor to accept ignominious conditions of peace. In the 12th century the Chinese conquered eastern Tibet, and towards the end of the century independent Tibet was shorn of its power and prestige and reduced within narrow limits. When Chinghiskhan early in the 13th century conquered northern China, he overran Tibet and brought to a final close the era of its political greatness.

Whatever was the precise period when the Tibetan boundary was first extended to the southward, there can be little doubt that they held a large portion of the sub-Himalayas while their power lasted, or till the 12th century at least. Five to six centuries of dominion will amply account for the present Tibetan population of the region, and for the influence its presence has exerted on the native Gangetic tribes. But there appears to be no room for doubt that the Tibetan dominion, during a part of this period, extended into the plain also. The ancient history of Bengal is so obscure that it must receive light from ethnology rather than communicate it. But allowing for the aversion of Hindu writers to acknowledge the presence and power of a race like the Tibetan, and the unlimited facilities for suppression, distortion and invention of facts, which their historical morality gives them, I think a combination of Indian records with the unimpeachable evidence of ethnology and the notices of Chinese historians and travellers, leads to the inference that the rule of the Tibetans and Tibeto-Himalayans for some centuries embraced not only the Sub-Himalayas but Assam and Bengal. Chinese historians relate that from the 7th to the 10th century, during the Tsang dynasty, the Tibetans extended their conquests to the Bay of Bengal, to which they gave the name of the Tibetan sea. Bengal appears to have been conquered about the middle of the 7th century, but it is probable that the Tibetans had, at an earlier period, crossed the Himalaya and established their predominance over the southern mountaineers. After the destruction of the last pure Arian dynasty of Magadha by the celebrated Chandragupta, various families and tribes of mixed and native race appear from time to time to have obtained predominance over portions of the lower Gangetic province and sometimes over the whole of it. The Andhra dynasty ended in A. D. 436 and in the words of Elphinstone, "is succeeded in the Puranas by a confused assemblage of dynasties seemingly not Hindus; from which and the interruption of all attempts at historical order, we may infer a foreign invasion followed by a long period of disorder." One of the dynasties of Bengal whose existence has been placed beyond doubt by inscriptions, had the family or distinctive name of Pal or Pala. Mr Colebrooke concludes that it probably reigned from the 9th to the latter part of the 11th century. In the earliest inscription Tibetan tribes are mentioned

amongst the subjects of the royal granter, Deb Pal Deb (A. R. vol. I. p. 126). It also mentions the Hun, but as a later inscription mentions this tribe as having been conquered by a King of Bengal, it is probable that the name does not refer to the Tibetan tribe of Hun or Ngari but to the Hun designated white, a foreign tribe mentioned by Cosmas as invading cities in upper India in the 6th century. Elphinstone appears to consider the enumeration of Tibetan tribes amongst those subject to Deb Pal Deb as tantamount to an assertion that this dynasty had subdued Tibet. But it is susceptible of a different explanation. Neither ethnology, history, tradition nor the general probabilities of the case, countenance the supposition that Tibet was ever invaded from Bengal. But if Bengal was at one time subject to Tibet, the Tibetan tribes would be mentioned along with the Indian ones, in any enumeration of their dominions by the rulers of Bengal. The Pal dynasty may have been itself of Tibetan origin, but even if it succeeded to a Tibetan one, the practice of mentioning the Tibetans might be continued, for history affords numerous instances of a precisely similar sacrifice of truth to gratify royal vanity. The simplest explanation of this obscure portion of Indian history would be to consider the Huns as being in fact the Tibetan invaders. If their conquests extended from Bengal to Kashmir in the 7th century, their presence in Upper India would be probable instead of the reverse. Their final conquest by the Pal rajas might, in that case, mark the close of Tibetan dominion in the plains. The era assigned to the Pal dynasty is by no means well ascertained and it is possible that the cis-Himalayan conquests of the Tibetans may have commenced before the 7th century. All the ethnic facts are in favour of an early and long continued movement of the Tibetans into the Himalayas, and it may prove that the revolution in the middle of the fifth century which extinguished the Maurya dynasty, was occasioned by the first Tibetan eruption into the plains. It must, at the same time, be remarked that the fact of several native tribes such as the Kiranti, Tharu, Kocch and Kachari having at different times obtained power, is against the supposition that Bengal continued for many centuries to be subject to a single strong Tibetan government. It is probable that, on the withdrawal of the direct Tibetan authority, Bengal long continued in an unsettled state, and that the partially Tibetanised tribes of the sub-Himalayas invaded the plains and obtained temporary sway. The inhabitants of Purnia have confused traditions of the invasions and conquests of the Kirats, Kiranti or Kichaks and mention several princes of Morang to whom they still offer worship (Eastern Ind. vol. iii. p. 40 &c.). Buchanan Hamilton says they appear to have been very powerful in Kamrup, Matsya and Mithila. That the sway of the Kirat at one period extended across the Gangetic valley is corroborated by the traditions of the Male or Rajmahali. In the mythic ethnology which they possess

like most rude tribes, the human race is divided into seven families descended from seven brothers, 1st Hindu, 2nd Mahomedan, 3rd Kirwary, 4th Kiratir who eat hog's flesh, 5th Kadir who eat all sorts of flesh, fish and fowls, 6th Europeans, and 7th Mullare (Mol), the descendants of the eldest brother i. e. the aborigines of the land. (Shaw, A. R. iv. 46). The 4th family are evidently the Kirati or Kiranti, for it is added that they went into the hills north of the Ganges. Another Gangetic tribe, the Tharu, appear to have been dominant in Gorakpur at one time. Buchanan Hamilton is inclined to connect the Tharu dominion with the Tibetan invasion of the 7th century (Eastern Ind. vol. ii. p. 342).

The vocabularies which Mr Hodgson has published appear to me to confirm the conclusion I have drawn from the physical character of the Nipal tribes, and along with their non-Tibetan customs, to prove that they belong mainly to the Gangetic race, save where the Tibetan physical element preponderates, in which case the stock must, of course, be considered as west Tibetan. At present I leave out of view the more archaic or fundamental connection between the Tibetan, Gangetic and Burman races and languages.

The Serpo are Tibetans like the Lhopa. The Murmi appear, from Dr Campbell's description, to be also Tibetan or more Tibetan than Gangetic. They are taller, coarser in their features and more Tibetan in their temperament than the remaining tribes.*

The Rong or Lepcha retain the lowest stature of the Kham or East Tibetan, Gangetic and Burmah-malayan race, their average height not exceeding five feet (Campbell). The face is round and the expression is remarkably lively and soft, which is the reverse of the Lhops and West Tibetans, and their lively and inquisitive character does not belie it. The ruling family and a portion of the population are descendants of a Kham-pa chief and his followers who came from eastern Tibet seven generations ago, on the invitation of the Rong.

The Limbu appear to resemble the Rong but to be a little taller and more muscular, with the eye rather smaller. The nose is said to be smaller too, although the bridge is somewhat higher. The forefathers of the tribe on the west-Tibetan side were from the province of Tsang. The Kiranti, Kirata or Kichaks, as well as the Eaka and Rai, are often included under the name of Limbu, and Dr Campbell informs us that in appearance all are very much alike.

The Newar are Gangetic much more than Tibetan. According to Kirkpatrick, they are of a middle size, with broad shoulders and chest, very stout limbs, round and rather flat face,

* But in height, it would appear that, to Mr Hodgson's eye, they do not notably exceed the Gangetic stature. Mr Hodgson, speaking of the Chepang, says, "in height they are scarcely below the standard of the tribes around them (Magar, Murmi, Khas, Gurang, Newar) who however are notoriously short of stature."

small eyes, low and somewhat spreading nose. He adds the suggestive remark that the offspring of a Newar woman with a Parbatia might almost be taken for Malays, at least he adds, "that is the physiognomy by which it appears to me the features of this mixed race may, on the whole, be best illustrated".* The only feature in which Kirkpatrick's figures (Nipal p.p. 185 and 186) are not Indonesian of the softer type, is the eye, which is more Chinese, a remark that appears to be applicable to all the Gangetic and Tibeto-Gangetic tribes. Dr Campbell remarks that the Bodo resemble the Newars in complexion and feature more than any other people he has seen in or near the mountains.

The Haiu are about 5 feet 4 inches in average height. "The bridge of the nose is not perceptibly raised, the cheek bones are flattened and very high, the forehead narrow." They differ in religion and habits from the surrounding tribes and have a tradition that they came originally from Lanka (Ceylon) when their King Rawan, whom they still worship, was subdued by Ramchandra (Rama)—Campbell J. A. S. 1840 p. 611. The Chepang and Kusanda resemble the Haiu (Hodgson). All three are more slender and darker than the other tribes and greatly resemble in form and colour, the people of the plains, particularly the Kols†

The remaining tribes appear to be Gangetic more than Tibetan. Mr Hodgson remarks of the cis-Himalayans generally, that "they are smaller, less muscular and less fair than the trans-Himalayans, but the differences are by no means so marked as might have been expected, and, though there are noticeable shades of distinction in this respect between the several tribes of the cis-Himalayans as well as between most of them and the Tibetans, yet if they be all (as surely they are) of the same origin, it must be allowed that very striking differences of climate and of habits operating through 40 to 50 generations (for so far back I confidently place the immigration) can produce no obliterative effects upon the essential and distinctive signs of race."

When the Arians advanced from the westward into the plain of Bengal it appears to have been inhabited by one race, of which the present non-Tibetan tribes of Assam, the Himalayan and the Vindya chains are remnants. In the plains it has not yet been

* Wherever the softer Turanian comes in contact with the Iranian or Semitic types, similar modified forms are produced. These types are partially intermixed along the whole of the extended south western borders of the Turanian province, from New Zealand to Lapland, the geological axis of the Old World, and throughout the parallel axis of the New World.

† From this description it may be concluded that these tribes retain more of the ancient Gangetico-Dravirian character than the surrounding ones and this was Mr Hodgson's own impression until recently. The historical tradition of the Haiu appears to be inconsistent with a Tibetan or Himalayan origin, and it rather points to a Dravirian one. The dominant tribe or family in Behar and Bengal, immediately prior to the Tibetan or Tibeto-Himalayan era, was called Haihaya (Wilford, Buchanan Hamilton &c.). To this family the Andhra dynasty belonged. Is the name Haiu not connected with Haihaya?

completely absorbed by the intruding race. In the more eastern portions of Bengal towards the hills, and particularly in Silhet and Assam, the Bengalis retain the stamp of their double origin, and considerable numbers of the native race are still intermixed with them. The principal remnant are the Kocch, who, as Mr Hodgson informs us, abound in the northern part of Rungpur, Purnea, Dinajpur, Mymensing and throughout Kamrup and Darang as far as the Dhanari river, c. 94° E., "and their numbers cannot be less than 800,000 souls, possibly even a million or a million and a quarter." They are now Bengalis in language, manners and religion, save a small remnant called Pani Kocch, who are described by Buchanan Hamilton. There are other remnants of the ancient race of the plains called Kachari, (Bodo, Boro or Mecch) Dhimal, Raba, Hajong, Batar or Bor Kebrat, Polloh, Gangai, Maraha, Dhanuk &c. They are spread eastward along the skirts of the mountains of Bhutan and Sikim as far as Aliganj. The skirts and low vallies of the sub-Himalaya beyond Sikim contain other tribes of the same race. Including those already enumerated, Mr Hodgson has ascertained 28 between Assam and Kumaon, or from the Bonash to the Kali. Of these the most numerous are the Bodo or Kachari. Their range is as wide as that of the Kocch but their numbers do not amount to more than 150 to 200,000 and they are chiefly found in the forest tract, 15 to 20 miles broad, between the mountains and the plain. They extend from northern Assam along the southern side of the Brahmaputra to the Surma and along the skirts of the Himalaya as far west as the Konki, and are also spread in large numbers over the eastern portion of the space between these two diverging bands, that is Middle and Lower Assam. These two tribes were the latest dominant ones of the Gangetic race in Bengal. The northern Kachari are said to have occupied the eastern part of Assam and to have conquered Kamrup, about 1,000 years ago, spreading over Assam, Kachar, Tipurah, and Silhet, and, it is to be presumed, as far as their present western boundary on the north. It is probable that the Kocch were previously the ruling tribe in Kamrup and at all events they must have been the dominant power immediately to the west of Kamrup. Some time before the invasion of Assam by the Ahom or Lau, the Kocch conquered the Kachari and seized the dominion of Kamrup. They did not extend their sway into Hirumbha (Kachar) and Tipurah and the ruling families in these two territories appear to have remained Kachari. It is probable that the Kacharis along the skirts of the Himalaya retained a certain degree of independence. The Hirumbha tribe call themselves Rangtsa and give the same name (Ramsa) to the languages of the Kacharis of the plain (Bodo), their own tongue being called Hoje or Hojai. No example has been published of the latter. Mr Grange declares that it is totally different from the former. This can only mean that it has a portion of non-Bodo words, a circumstance explained by the Rangtsa having, for

many centuries, been intermixed with Nagas and Mikirs. The Hajong, who are found along the foot of the hills from Gauhati to Silhet, appear to preserve the same name. Mr Hodgson considers that they and the Rabhas of the same tract are only Bodos in disguise.

According to the Rangtsa tradition they came from the N. E. of Assam when they conquered Kamrup. The period falls within the era when Tibetans spread into the sub-Himalayas and Bengal and as the conquest or resumption of Kamrup by the Kocch took place some time before the beginning of the 12th century, the event was probably connected with the decay of the Tibetan or Tibeto-Himalayan predominance. But how could the Kachari become dominant during the period of Tibetan power? The explanation must be that the Kachari were no other than the principal Tibetanised tribe of lower Bhutan. The Tibetans did not dislodge the ancient tribes of this tract but only conquered and modified them, and the Changlo and Abor languages appear to place it beyond doubt that it was chiefly through the partially Tibetanised tribes and languages along the northern margin of Assam and in contact with the dominant Tibetan population behind them, that an ethnic Tibetan influence was maintained in the valley of Assam and the countries to the south of it.

The tribe next in importance to the Bodo appear to be the Dhimal who number about 15,000, and are found in the N. W. corner of the country of the Kocch and Bodo, from the Konka to the Dhorla or Torsha. Mr Hodgson has given a full and satisfactory account of the Bodo and Dhimal. From his description and figures I conclude that they are Burmah-malayan physically. The face is inferior to the finer type of this alliance, the nose being less, and the cheek bones more prominent, the lips more heavy, the eye deficient in size and brilliancy, and the expression comparatively soft and relaxed. The eye indeed appears to be smaller and more oblique than in any of the Asianesian tribes. But altogether the face has a strong resemblance to a very common insular type. Dr Campbell, another very competent observer, says they are fairer than the Kocch and have little of the regular features of the Hindus which characterise that tribe. "The cast of the Mech countenance is strongly Mongolian, but accompanied by a softness of outline which distinguishes them readily from the more marked features of the same order of the Lepchas, Limbus and Bhotias. They resemble the Newars of the valley of Nepal in complexion and features, more than any other people I have seen in or near these mountains; they are taller, however, and the fairness of the complexion is entirely of a yellow tinge, whereas the Newars are frequently almost ruddy. Many of the Mechis strongly resemble the Mugs and Burmese in face and figure." (J. A. S. 1389 p. 624).

I now proceed to the south Gangetic or Vindyan tribes, the

Male or Rajmahali, the Kol, the Khond and the Gond.

The territory over which these tribes are spread includes the head of the Nerbudda basin and a large portion of the basins of the Godavery and Mahanuddy, of the subordinate ones between the latter and the Ganges, and of the Vindyan division of the Gangetic basin from Rajmahal to the heads of the Soan and Cane. It is thus difficult to obtain an appropriate common name for these tribes without violating the rule not to confuse distinct tribes under a single tribe name. As Gondwana in its wider sense embraces the larger part of the land of these tribes, they may be termed, for want of a better word, Gondwani, which while it is founded on that of the most widely spread tribe, leaves the latter in possession of its own name, Gond. The Gondwani physical type is perhaps best characterised as Gangetic with a variable but generally slight crossing of South Indian. They are darker and more slender than the Gangetic race and the limbs in particular are sligher. Their comparative sparseness makes them sometimes appear taller, but the average height appears to be nearly the same as the Gangetic. The face is sub-Turanian, being round, with high cheek bones, depressed nose and small eyes, generally quick and brilliant. The contour is a harsh oval, generally obtuse, but in some tribes tending to elongation. It is not lozenge shaped as in the Tartar race nor ovoid as in the Tibetan. The lips are more protuberant. Lieut. Shaw says the Male are mostly very low in stature, but stout and well proportioned. "To find a man six feet high would I believe be a phenomenon, there are many less than 4 feet 10 inches and perhaps more under 5 feet 3 inches than above that standard. It may not however be far from the truth to consider that as the medium size of their men. A flat nose seems the most characteristic feature; but it is not so flat as the Kafiris of Africa, nor are their lips so thick, though they are in general thicker than the inhabitants of the neighbouring plains." Buchanan Hamilton thus describes the Male:—"Their features and complexion resemble those of all the rude tribes I have seen on the hills from the Ganges to Malabar, that is on the Vindya mountains. Their noses are seldom arched, and are rather thick at the points, owing to their nostrils being generally circular; but they are not so diminutive as the noses of the Tartar nations, nor flattened like those of the African negro. Their faces are oval, and not shaped like a lozenge as those of the Chinese are. Their lips are full but not at all like those of the negro; on the contrary their mouths in general are very well formed. Their eyes instead of being hid in fat and placed obliquely like those of the Chinese are exactly like those of Europeans. In fact, considering that their women are very hard wrought, they are far from having harsh features." (E. Ind. vol. II. 123.) Bishop Heber describes the Male nose as rather turned up than flattish and says that the Malay or Chinese

character of their features is lost, in a great degree, on close inspection.

This is confirmed by Captain Sherwill's description and figures (J. A. S. 1851 p. 544). As he compares them with the Sonthal, a tribe of the Kol family, now settled in the vallies and skirts of the Rajmahal hills, I will first extract his account of the latter. "The Sonthal or lowlander is a short, well made and active man, quiet, inoffensive and cheerful; he has the thick lips, high cheek-bones and spread nose of the Bhil, Kol and other hill tribes of southern and central India; he is beardless or nearly so." "He is larger and taller than the hill man (Male) and generally stands 5 feet 6 inches in height and weighs about 8 stone. The women are fat and stout." The Male or hill-man is "much shorter than the Sonthal, of a much slighter make, is beardless or nearly so, is not of such a cheerful disposition, nor is he so industrious." Stirling says the Kols are black and ill-favoured. Tickell says the Ho tribe are eminently handsome when young. Hodgson says he has seen many Oraons and Mundas nearly black. Speaking of the race generally he says that they have a similar cast of face to the Kocch, Bodo and Dhimal. As the Mundas are much less handsome than the Ho, although the stock is the same, it is probable that intermixture with Hindus has not only civilised the latter but improved them physically.

These descriptions still leave some important points undetermined. But combining them, and aided by Captain Sherwill's figures, I infer that the Male and Kol resemble the coarser Binua tribes of the Malay Peninsula more than the Burmans, the Malays or other Indonesian tribes. But the same type is found amongst the Malays and Burmans, although generally softened. The anterior maxillary projection of the Male, and the short and partially turned up nose caused by it, are Binua.

The vertical elongation of the head above the line of the zygomata is also Binua, and so is the small stature. The special resemblance appears to end here, the Male head being, in other respects, free from the peculiar defects of the Binua.

In the latter the cheek bones are broad in all directions and much more prominent, giving to the face below the base of the forehead, a marked lateral developement beyond it, or to the forehead an appearance of being compressed. The lower jaw is more massive, spreads out and does not rise rapidly, thus producing an obtuse chin. The anterior maxillary projection is often much greater than in the Male, approaching to prognathous. The Male head, like that of the Kol, has more of an elongated oval than of a lozenge shape. The forehead is not narrow and the lateral projection of the zygoma is comparatively small. Nothing is said respecting the shape of the back of the head, a very important point in comparing Turanian tribes.

The Khonds, who appear to be a branch of the Ghond family,

are found chiefly in the Eastern Ghats south of the Mahanuddy. The face is round, the cheek bones are somewhat prominent, the forehead full and expanded, the nose flattish and broad at the point, the mouth large with lips full but not thick. The eye is quick and brilliant, the general expression of the face intelligent, determined and good humoured. In person they are muscular, neatly formed and about the height of the Hindus of Southern India. The skin is clear and glossy and it varies in colour from a light bamboo to deep copper. Like the other Gangetic tribes they have little or no beard. (Macpherson).

The Ghonds resemble the Khonds but they are coarser in their features and larger in their persons. Some of the pastoral tribes are comparatively low in civilisation. Dr Bradly says "the Ghond is generally sturdy limbed, and rather under than over the middle size, dark skinned with harsh oval features. We note in him the distinctive facial peculiarities of the Tartar tribes, namely, high, broad, cheek bones, a low round forehead, and expansive alae of the nose, though not flattened like the Negro, moreover the absence of the beard and moustache makes the resemblance perfect. These physical peculiarities are to be met with also in the aborigines of the Malayan Peninsula, a race who have with little doubt, sprung from a Tibetan origin. Those who may have seen these two races, the Ghonds and the Malays, cannot but be struck with the close resemblance existing between them." (Bomb. Geog. Jour. vol. vii. p. 178.)

From this review it may be concluded that the oldest races of India, Ultraindia and Asianesia were of a variable African type, the two principal forms being Australo-Tamulian or quasi-Semitic and Negrito, followed in Asianesia by the Malagasi, that the present prevalent Ultraindian races entered the region from the N. E. and, at a very remote period, spread on the one side over Ultraindia and the basins of the Brahmaputra and Ganges and partly into Southern India, and on the other, were diffused by a long succession of movements over all Asianesia. Throughout the region they came in contact with the ancient races and have in some places variously blended with them and in some dislodged or exterminated them, while in others the old tribes have been able to maintain a certain degree of independence and purity. In Southern India the ancient element was preserved in some degree, owing apparently to a civilisation early received from partially allied Semitico-African and Semitic nations. In the Andamans, the interior of Great Nicobar, the jungles of the Malay Peninsula, Australia and the various Papuan and partially Papuan Islands, the African element has been maintained from the comparative isolation of the tribes. In the Gangetic province, as in the greater portion of Ultraindia, including the Malay Peninsula, the intrusive race appears to have been recruited by the entrance of new tribes from the N. E. and to have ultimately assimilated the native race.

although the influence of the latter is still slightly perceptible. The Arians at a comparatively recent period advanced into India and have deeply modified the physical character of all the more exposed and civilised tribes on both sides of the Vindyas, but to a much greater extent on the north than on the south. Lastly the west (or middle) Tibetans, early in our era, crossed the snowy range, occupied a considerable portion of the sub-Himalayas and more or less modified their Gangetic inhabitants. But their physical influence on most of the Gangetic tribes, Himalayan, Lowland and Vindyan, appears to have been so slight that it is now imperceptible. I shall proceed to enquire whether the linguistic records tend to confirm or modify these inferences.

CHAPTER III.

GENERAL CHARACTERISTICS OF THE LANGUAGES OF CHINA AND
ULTRAINDIA.*

Elementary Phonology.—In its phonology the Chinese is highly tonic and vocalic, while aspirated and nasal sounds are frequent. Complex vowel sounds are common, and its phonetic basis is increased by four intonations, each of which having a high and a low key, eight distinct tones are obtained. The phonology, like the glossary, varies in different parts of the empire. Where it is most vocalic, the only terminals are vowels, nasals (*n, ng, m,*) and the aspirate *rh*; where least so *k, t; p, b; l, r* also occur. The Anam, Kambojan, Siamese, Mon, Burman, and the other Ultraindian languages are all characterized by strong and complex sounds. In Anam there are six tones, in Siamese five, in Burman only two. Anam and Siamese abound in complex vowel sounds, and the Burman family in complex consonantal sounds which are harsh in Singpho, less so in Rakhoing and much softened in Burman. All possess vowel and nasal terminals, (*ng, n, m,*) and in addition Anam has *k, t, ch; nh; p*;—Kambojan *k, t; l, r; s; p; b*;—Siamese *k, t; r; s; p, b*;—Mon *k, t; nh, h; p*; and Burman *k, t*. It

* I have made this section very brief, and have limited my remarks to the languages of the more important tribes, because the Chinese and Ultraindian languages will be fully examined in the paper on the ethnology of South Eastern Asia. This section is, in fact, an abridgment of a portion of that paper. The Gangetic and Dravirian languages will be examined somewhat more fully, as I do not propose to return to them, unless the progress of research in India should hereafter render it advisable to do so. But I shall carefully attend to the labours of Indian ethnologists and comparative philologists, and, from time to time, notice those results that may appear to confirm or invalidate any of the views which I have expressed in the present paper, or to throw further light on the ethnology of Ultraindia or Asia-nesia. The notices of the Chinese and Ultraindian languages contained in the text are so brief that I shall reserve a full enumeration of the authorities I have consulted until the paper above referred to is published. It will be enough to mention here that for the Chinese dialects I have availed myself of the grammars &c. of Premare, Abel-Remusat, Morrison, Medhurst, Bridgeman, Williams &c. and various notices in the Chinese Repository; for Anam of Tabard's dictionary &c.; for Siamese of the works of Low, Pallegoix and Taylor Jones, for Burman of the grammars of Judson and Lattier; and for Mon of Low's notices. For much assistance, both in communicating data and procuring it from others, I am indebted to my friend Mr O'Riley. To his zealous aid I owe the possession of additional vocabularies of Mon, some dialects of the Burman family, two dialects of Karen (compiled I believe by Mr Mason), some Mon sentences and grammatical notices by Mr Mason and similar data for Silong by Mr Brayton. I have received valuable assistance of the same kind from Mgr. Pallegoix, Mgr. Le Fevre and several other learned missionaries of the "Association de la Propagation de la Foi," who are at present the most distinguished and successful cultivators of the eastern languages of Ultraindia. My Kambojan data have been directly derived from Kambojans and I have endeavoured to acquire from Chinese, Anamese, Siamese and Burmans some degree of familiarity with the general characters of their very remarkable phonologies. The Babel of languages by which an ethnologist may at any time surround himself in the Straits is useful for some purposes and particularly for phonetic comparisons. Whoever has listened to natives of Nias, Madagascar and Mosambique assembled in the same room, has learned some ethnological facts which the most elaborate grammars of their languages could not have taught.

thus appears that the monosyllabic languages in general have a decided tendency to the same terminals. Vocalic ones are most prevalent, but it must, at the same time, be borne in mind that the vowels are very varied and complex, being, in fact, frequently inchoate or smothered consonants rather than pure vowels. Even in the least tonic dialects the terminal vowels are often double.

All the languages, as we have seen, affect nasal finals. The most vocalic appear to have only the liquid *ng*, (*Karen*) or *ng* and *n*, (*Burman*), but the greater number have also the labial *m*. The vocalic tendency is strongest in some of the Chinese and Irawadi dialects. The Pgho and Sgau dialects of *Karen* appear to have no other final consonant but *ng*. *Kambojan* and *Siamese* have nearly the same terminals as the most consonantal Chinese dialects, but they add the sibilant. *Kambojan* has both the Chinese liquids *r*, *l*, but *Siamese* has only the hard one, *r*. *Anam* and *Mon* want some of the finals common to these languages i. e. the liquids and the sonant labial *b*. *Mon* also wants the sibilant of *Siamese* and *Kambojan*, to which *Anam* may be said to possess an approximation in its *ch*. *Mon* and *Anam* have *n̄h* which probably represents the Chinese *r̄h*. All the languages have aspirated forms of several of the consonants, as *k̄h*, *ḡh*; *t̄h*, *d̄h*; *p̄h*. In some languages of the Irawadi group,—*Mon*, *Karen*, *Burman* &c,—the aspirate may also precede some consonants.* The aspirate very rarely precedes another consonant in *Siamese*. The liquids *l* and *r* may also follow most other consonants as *kl*, *kr*, *tr*, *pl*, *pr*. Palatal or cerebral forms of the dentals occur in most of the languages.

The complex and compound vowels are exceedingly numerous and most of them cannot be represented by unmodified Roman letters. The Chinese has such compound consonantal sounds as *rh*, *sz*, *tez*, *tw*, *tsu*, *hu*; *Anam* *bl*, *ml*; *Kambojan* *sr*, *chr*, *sl*; the *Siamese* a peculiar *r* sound, and peculiar nasals; the *Burman* *m̄r*, *m̄ru*, *hm̄u*, *hm̄r̄u*, *d̄zh* &c; *Mon* *m̄n*, *kn*, *bl*; *Singpho* *m̄b*, *mp*, *ml*, *nt*, &c. The deficiencies are nearly all in sonants. The sibilant dentals are wanting in *Anam* and *Siam*; the sounds *d̄*, *v*, *z* and initial *r* in Chinese (*z* and *v* are used in *Ningpo* however); *y*, *w*, *f*, *p*, in *Anam*; *g*, *z*, *v*, in *Siam*; *ch*, *j*, *s*, *z*, *v*, *f*, and *r*, in *Burman*, but *ch*, is represented by *tsh*, *s* by the sibilant *ts*, and *z* by *dz*, or *j*, and *Rakhoing*, *Singpho* and the other dialects which preserve the old *Burman* phonology have *r*, the modern *Burman* converting it into *y*.

It thus appears that all the languages are more or less aspirate, but the decided dento-sibilant tendency of the Chinese and Irawadi families is not found in *Anam*, *Kambojan* and *Siamese*. *Kambojan* exhibits a distinct sibilant tendency in the frequent sibilic liquid *sr*, *sl*, *chr*. *Sr* occurs in *Mon* also. The most aspirate of the

* But these cases must not be confounded with those in which the aspirate follows, a mistake which some grammarians have done their best to induce by writing the aspirate first—e. g. *hp* for *ph*.

labials, *v*, is found only in Ningpo and Anam, in the latter representing both *f* and *w*. In the other Chinese dialects and in Siamese it is represented by *f*. Burman wants both *v* and *f*, in this respect, as in many others, approximating to its modernized Tibetan allies. But several of the adjacent languages—Kyen, Heuma, Naga &c., have *v*, *f*, or both. The general surd tendency of the languages is shewn in the frequency of final *k* and *t*, the absence of the sonant finals *g* and *d* in all the languages, with the total want of *ḡ* and *ḡ* in nearly all the Chinese dialects, and of *g* and *z* in Siamese.

The Irawadi family is chiefly distinguished from all the others by the paucity of its tones and by the aspirate sometimes preceding consonants, while it departs from the other Ultraindian languages and approaches Chinese in its compound sibilants and in the compounds in which *w* forms an element.

The tonie languages vary considerably in their tendency to vocalic finals. Some of the Chinese dialects and the East Ultraindian are more consonantal than the Irawadi languages and the remaining Chinese. The Burman of the Irawadi is itself more emasculated than the Rakhoing. From this it may be inferred that the Ultraindian languages were more consonantal in earlier eras. At present Kambojan is the most consonantal. It is very dental and has about 70 per cent of final consonants.

The primitive and complex phonology of S. E. Asia extends to the languages of many of the less cultured tribes, and probably to all. But we have much to learn respecting them and many dialects must exist of which we do not so much as know the names.

Structural Phonology. In Chinese there is no phonology of structure. The strong intonations prevent the phonetic union of different utterances by a unity of breathing, and as any alteration in the tone changes the word, no phonetic combination can take place through a shifting of accent. Each word is an indivisible and unalterable phonetic unity, and must consequently remain completely isolated. It cannot affect another word or be affected by it.* The same remarks apply in great measure to the other monosyllabic languages, but in the Siamese a structural process involving a sense of harmony may be detected in the phonetic prolongation of the last word in compounds, and I think Kambojan shews a tendency to pass into the dissyllabic class. Burman occupies a remarkable position between the purely monosyllabic or incohesive and the

* Bunsen, probably on the authority of Remusat or of Humboldt after Remusat, says that the change from the nominal to the verbal sense of a word is indicated by a change in the tone. This is inconsistent with the phonology of the language: Remusat's authority appears to be a passage in Premare, who says, "There are some who maintain that the tone is changed whenever a character changes from a noun to a verb." It evidently was not Premare's own notion. I do not find it noticed by any of the American or English writers on Chinese Grammar, and such a process is unknown to all the Chinese with whom I have conversed on the subject.

cohesive phonologies. Its words are in general monosyllables, but it possesses the power of phonetic union and the sense of polysyllabic harmony. This shews itself particularly in the junction between roots and formative particles. This is usually a real phonetic union, and purely euphonic particles are frequently added to render it harmonic. Other traits of a harmonic phonology also appear, and there is a well marked inflection. In compounds or when particles are postfixed, if both syllables begin with surds, the second initial is changed into the corresponding sonant. Final consonants are frequently lost in the initial consonant of the following word. A flexional trait exists in the conversion of neuter to active verbs by aspirating the initial consonant. In Singpho the negative is expressed by prefixing the nasal *n*. In the Kambojan, Mon and most of the N. W. Ultrindian languages definitives are phonotically prefixed to substantives.

Ideology. The Chinese language is exceedingly concrete. Most of its words are crudes. But many, from their nature, are only used in one form, and a considerable class have become purely accessory and now only occur as particles. All these appear to have been originally crudes or full names. By the frequent recurrence of the relations and modifications they were employed to express, they have gradually lost their independent crude sense and acquired a more generic one. The language at present possesses numerous purely abstract and relational words. But many words used in a relational or modifying sense still preserve their crude meaning. Thus the words for "child" and "ear" are diminutive particles. Many crude words have received various special, often metaphorical, applications and amplifications of meaning, as in other languages. The words that have lost their crude sense, and are only used as particles of relation, are entirely analogous to the formative particles of the adfixal and inflexional languages. Most of the peculiarities of the language result from its primitive phonology. The permanence of the crude nature of most of the words is a consequence of the want of all phonetic flexibility, and both necessarily affect the structure of the language. As the phonetic elements are restricted to monosyllables, they do not, even with the tones, produce in actual use more than 1,000 sounds.* The same sound must hence be employed to express many unconnected ideas, and there is an instance in which 247 words, represented in writing by as many distinct characters, have the same sound. The great number of these homophonous words has given rise to the habit of using two sounds having similar or allied meanings, to avoid obscurity or mistake. To the same cause may, in part, be attributed the large

* The total number in the Tonic Dictionary, is 1583. Siamese has a much broader basis. The number of distinct elementary monosyllables in use is 1861, (about treble the Mandarin colloquial) and these are increased by the tones to 2702, exclusively of words of Pali origin, (Low.)

number of periphrastic expressions. The number of ideas that are expressed by two words, or by a full word and a particle, is so great, that if the language acquired the power of phonetic combination,—that is, lost the tones,—it would speedily become disyllabic.

The connection between the parts of a speech or sentence must be indicated by collocation and periphrasis, since in general each word is, *per se*, a crude. This has led to a generally rigid adherence to one order of terms. The relation of possession or attribution is the chief ideologic element, and it is signified by placing the possessive word before the word possessed. Substances are considered as possessed by qualitatives and definitives; actions by their modes; objects by the actions to which they are subjected. The preplacing of a word makes it possessive, qualitative, modal or adverbial, verbal &c., according to the nature of the speech, for much is necessarily left to be supplied by the train of ideas awakened in the mind of the hearer by his knowledge of the subject. More is often implied than is expressed. Many sets of words have also acquired peculiar meanings and the ideology is very metaphorical. Hence idiomatic phrases are abundant and assist much in redeeming the language from its crudeness and baldness. The frequent use of antithesis also serves to aid expression. With words taken substantively and qualitatively a possessive particle is also sometimes used. It follows the possessor and precedes the subject of possession. Although the pure directives are prepositional, many substantive and active words are employed in lieu of directives and retain their proper meaning and collocation. Although the object usually follows the action it sometimes precedes it.

There is no article, but the definitive pronouns are sometimes used (preplaced) in a manner that approximates them to the article. The crude names being specific, are individualised by adding to them words expressive of one of their characteristics, and many characteristics being common to large classes of objects, which receive a further fanciful extension, these individualising or segregative words serve also, as Mr Wells Williams has observed, to distinguish one homophon from another. Segregatives are very abundant and idiomatic. They constitute a marked peculiarity of Chinese and several of the allied languages. They are chiefly used in conjunction with numerals, the ancient or written collocation being usually, 1st the substantive, 2nd the numeral, 3rd the segregative (e. g. fish one tail), but the substantive is sometimes placed last, as it usually is in the oral or modern collocation. The particle *ko* is the most generic, its application having been extended from human beings to inanimate objects. Radically it appears to mean "thing", and it is sometimes used as a demonstrative either by itself or in combination with the proper demonstrative or 3rd pronoun. Number (singular or

plural) is inferred from the context, or expressed by reduplication, or by words of number or quantity. Sex and age are expressed by separate crudes,—*father, mother, child &c.* Crudes are made qualitative, that is possessive, by position or by adding a word signifying “of” or possession. Degrees of quality are expressed periphrastically. Pronouns are numerous; a great variety of periphrastic and metaphorical phrases are employed pronominally, expressive of respect, humility, &c. There is no distinction of sex in any of the pronouns. Possession, as we have seen, is expressed by position, sometimes aided by a particle. Direction is expressed by preplaced particles. Many words properly substantive or verbal are used as prepositions. The modal or adverbial sense is given to such words by reduplication or by adding a particle. All the relations and modifications of action words are suggested by the context, or expressed by separate words. The copula is inherent or understood, but there are several words which may be used for it. The direction of transitive action to or from the speaker may be expressed. The passive is indicated by words signifying “to see” “to eat” &c. as in many other languages.

Perhaps the most distinct notion of the Chinese ideology is obtained by considering its deficiencies compared with adjacent languages. It has no polysyllables, although compound words are abundant, no phonetic combinations or structural processes, no affixes or flexions. It wants the separate pronominal plurals and the postplaced pronominal directives, the objective particle &c.

Anamese has all the characteristics which a crude ideology impresses on the Chinese. The differences are not many. Double words are common but segregatives appear to be less abundant and this probably arises from the distinction into animate and inanimate objects having superceded the necessity for retaining less generic divisions. The word *kai*, the postplaced feminine particle for animals, is used as a universal definitive for inanimate things. It consequently approaches to the character of a definite article. Animals take the particles *kon*. In this respect Anam departs from the adjacent Chinese and Siamese and allies itself with the Kambojan, Mon, Kasia and some of the N. Ultrindian and Gangetic languages. The more generic definitive “that” is much used and often where we would use the definite article. The collocation is different from the Chinese. The possessives, qualitatives, and definitives are postplaced. As is the case in the Chinese, the subject generally precedes and the object follows the action-word, but the position of the object is less regular, as it may precede. Qualitative and active words receive a generic substantive sense by preplacing the word *su*, “thing.” There are no distinct pronominal plurals. Adverbs and prepositions abound. It does not appear that substantives are made adverbial

by reduplication. Particles are numerous and have various idiomatic applications.

Kambojan and Siamese agree with Anamese, and differ from Chinese, in placing the possessive, qualitative, modal and demonstrative after the word to which they relate. The demonstrative is much used. In Siamese, when a particle is used for the possessive, it precedes the possessor, thus reversing the Chinese collocation. In most other respects Siamese and Kambojan are similar to the Chinese and Anamese. Compounds and segregatives abound. None of the latter are in Siamese so generic as the Chinese *ko* or the Anam *kai*. In Siamese *khun* is applied to human beings and *tuá* to inferior animals and to some kinds of inanimate objects. The others have restricted meanings but *bai* (leaf or leaf-like) and *án* (amorphous) are frequently extended beyond their own class, the modern tendency of the Siamese, as of the Malay, being to break down the barriers between the classes and limit the number of segregative particles. Kambojan has a generic definitive *pa* which is prefixed to many substantives and undergoes some euphonic variations, as *pá, pǎ, p.* *Si* or *chi* is also used in the same way but more rarely and *ki* occurs in a few words. The ruder dialects of the Lower Mekong basin resemble the Kambojan and not the Siamese or Anam.

Burman is crude like the other monosyllabic languages, and, like most of them, abounds in homophons, segregatives and double words. It is distinguished from the preceding monosyllabic languages by its postpositional and inverse collocation, directives following nouns and the object preceding the action. It agrees with Anam and Siamese, and differs from Chinese, in placing the substantive before the qualitative, while it follows the latter, and departs from the former, in placing the modal before the verb and the possessive before the object of possession. The possessive particle being postplaced as in Chinese serves to unite long sentences. This is a marked point of agreement between the Chinese and Burman classes of language. It has a great abundance of particles, some of a kind not found in the other monosyllabic languages; thus it has an agentive particle. Numerous modifications, relations and nice distinctions are expressed by the particles, which are capable of combination. Many are more generic and convertitive than those of the other monosyllabic languages, and have a closer approximation to the postfixes and prefixes of the more developed languages. Numerous generic relations and modifications of substantives are thus indicated. Thus an action word is converted into an abstract substantive, into the generic designation of the place where the action happens, of the person who performs it and of its object. Tsa "eat," atsa "food," tsa-ra, "a thing made to be eaten;" ru "mad," ma feminine postposition, aruma "a mad woman;" iek

"to sleep," *iekra*, "bed" (sleep-place); *ray* laugh, *raykhyet*, *present* subject of laughter.

Several euphonic particles are used to give a phonetic union to the principal word and its servile postfix. By the particles the connection of the component parts of a sentence is also much aided. The Burman ideology is much less crude than the Chinese, Anam and Siamese. From its inverse collocation it appears to us to be less simple and natural. The Burman ideology will be further considered in connection with the Tibetan.

The ideology of the Mon or Peguan has not been fully investigated, but from the notes of Colonel Low (Journ R. A. S. Vol. v. p. 42) it may be inferred that it belongs to the direct and prepositional East Utraïndian system, and not to the indirect and postpositional or Burman. Like the East Utraïndian languages, and unlike the Burman and Chinese, it places the agent or subject before, and the object after, the action, and the possessor after the thing possessed. Occasionally the object is placed first. It agrees with all the other Utraïndian languages, and differs from Chinese, in placing the substantive before the qualitative. Unlike the Burmese and Chinese, it has no possessive particle. The particles that mark the past are placed after the action and sometimes after the object. Directives when used are preplaced as in the E. Utraïndian languages. The modal follows the qualitative and the numerals and demonstrative the substantive. The modal generally precedes the action, as in Burman and Chinese. The plural is formed by reduplication. It thus appears that the Mon, notwithstanding its proximity to Burman and the common phonetic peculiarities, allies itself by its ideology to the E. Utraïndian family.

A striking peculiarity of the Mon, but one which is shared to some extent by the Kambojan and more slightly by Anam, is the use of definitive prefixes. One of these is the Kambojan *pa*, but the most common is *ka*. This peculiarity, with the dissyllabic tendency which it indicates, connects Mon with Kambojan and as the connection is confirmed by glossarial evidence, it results that these two languages now pressed into the outer extremities of the basins of the Irawadi and Mekong and separated by the Siamese, represent an ancient formation which must have extended across Utraïndia, at least in the lower basins of its great rivers. That it extended also to the north and west will appear from facts that will presently be adverted to.

The North Utraïndian languages, Burman and non-Burman, have relations both to the Mon-Kambojan formation and to the Burmah-Tibetan. It is advisable therefore to proceed to the Tibetan and advert to its connection with the Burman before attempting to ascertain the ethnic position of the remaining Utraïndian languages. They are so close upon the Tibeto-Indian province, and this circumstance has had so much influence in

determining their character that no inconvenience can be experienced from thus separating them in the meantime from the South and E. Ultraindian languages.

From the preceding remarks it appears that all the principal monosyllabic languages have, to a certain extent, a common ideology. The words are mostly crudes; collocation is much availed of to indicate the sense in which they are to be taken; homophons, segregatives and double words are common; particles are abundant and of great ideologic importance. The Anam, Siamese, Kambojan and Mon have the closest agreement in ideology. The Chinese, agreeing with these in most respects, is distinguished from them by the position of the possessive, qualitative, modal and definitive, and the great use that is made of the possessive idea. The Burman differs from all the others in placing the object before the action, and the directive after the principal word. It has nearly thrown off the tones. Words exhibit a tendency to unite, which is increased by the postpositional place of servile and subordinate terms, and the sense of harmony begins to be slightly felt. In all this and in the incipient, dissyllabic tendency of the Mon and other Ultraindian languages, we see an illustration of the manner in which highly intoned and crude languages are gradually brought to a condition beyond which it is impossible that they can at once advance and retain their primitive character. A power is developed in the Burman which, if it had not been arrested, would have converted it into a polysyllabic language. Fortunately we are enabled to trace the progress of development in adjacent languages belonging to the same well marked alliance. One of these, the Tibetan, is of especial interest, since it shows how, by the mere loss of the tones, and with little if any development of the harmonic tendency beyond that possessed by the Burman, the monosyllabic isolation of words is broken.

Additional note on Bunsen's assertion that in Chinese "if a word changes from its original verbal sense into a nominal, or vice versa, it changes its accent." From the context it appears that by accent we are to understand tone. The authorities cited are Humboldt's *Lettre* p. 24 and Remusat's note (4) to it. Humboldt, after remarking that the ideas of substantive and verb are necessarily mingled and confounded in Chinese phrases, says, "In Chinese, adjectives and even substantives change the accent when they pass into a verbal sense, and according to Mr Morrison (vol. I. part I. p. 6) words which are used both as nouns and verbs, have, when they serve as verbs, ordinarily the accent called *khui*". In his note on this passage Remusat says,—"This rule was given for the first tonic in *P' Essai sur la langue et la littérature chinoises*, (Paris 1811, p. 44). [His original authority in this as in so many other things was probably Premare, who, however, does not himself adopt the rule, merely saying that there are some who maintain it]. But it would be little exact to say with Mr Morrison, that the tone *khui* marks in preference the verbal sense. The change of tone indicates any modification of the primitive sense, whether a passage from the substantive sense to the verbal sense, or vice versa." Medhurst (*Notices on Chinese Grammar*, 1842) says "many substantives and adjectives are turned into verbs by giving to them the *k'heu* tone as *ch'ao*, a lord, *ch'ao*, to rule; *sh'ang* above, *sh'ang* to ascend". The fact appears to be that the Chinese Grammar has not the power of distinguishing the verbal from the nominal

sense by a change of the tone, but that there are a number of instances in the vocabulary in which the departing tone marks this distinction. But with the change of the tone the word is itself changed. Similar cases occur in most vocabularies, as I have remarked in another place. Thus in English, to which Humboldt refers, the verb *produce* does not become the noun *produce* by virtue of a general principle of English ideology, but because when a distinct substantive word was needed it was easier, and more in accordance with other habits of the language, to take the verb and modify it by shifting the accent so as to form a separate word, than to coin a new term. Such a practice might become habitual and thus rise into a general ideologic power, but in English it is still confined to certain words. In colonies considerable license is often taken in forming new words by such methods and it is possible that an English dialect may yet arise in some part of the world in which any verb of more than one syllable may be transformed into a noun by shifting the accent. It may be added, to complete the parallel, that as in Chinese the general rule is that the same word is verbal or substantival as the sense requires, without change of tone, so in English the number of words that are at once verbs and substantives without any internal modification is much greater than those which shift the accent. To reduce the Chinese examples on which Remusat relied to their true value, the number of words of analogous meaning that only differ in the tone, should be compared with the great number that differ entirely in meaning while they are phonetically identical, or are distinguished only by the tone.

The Reader is requested to make the following corrections in Chapter I. Part II. of this paper which appeared in the December No.

- Page 654 line 22 from the top for the word *Pylynesian* read *Polynesian*
 " line 24 from the top for the word *comformation* read *conformation*
 " 658 line 7 from the top after *ter* insert *s*.
 " line 20 from the top for *Bado* read *Bodo*.
 " line 21 from the bottom for *Yun-nau* read *Yunan*.
 " line 10 from the bottom for *Vindyan* read *Vindyas*.
 " 659 line 3 from the top for *Bado* read *Bodo*.
 " line 4 from the top between the words *Akha* and *Changlo* insert ,
 " line 15 from the top for *phonotically* read *phonetically*.
 " line 21 from the top for *Mongal* read *Mongol*.
 " line 24 from the top for *momadic* read *nomadic*.
 " line 2 from the bottom for the word *with* read *with*
 " 660 line 22 from the bottom for *iusular* read *insular*.
 " line 0 from the bottom delete *S* and insert *N*.
 " line 20 from the bottom after the word *having* insert *only*.
 " line 7 from the bottom for *Ultranidian* read *Ultraindian*.
 " 661 line 3 from the top for *ib* read *do*
 " 663 line 4 from the top in the foot note for *zygoma* read *zygoma*.
 " 665 line 19 from the top for *consonan'ed* read *consonantal*.
 " line 3 from the bottom for the word *cement* delete ; and insert ,
 " line 2 from the bottom after the word *conceptions*, insert —
 " 667 line 11 from the bottom before and after the word *secondary* delete
) and insert]
 " line 3 from the bottom delete (and insert []
 " line 2 from the bottom delete (and insert []
 " 668 line 39 from the top before and after the word *strong* delete) and
 insert]
 " line 2 from the bottom of the note before the word *el* insert [
 " 669 line 15 from the top between the words *them* and *at* delete , and
 insert A
 " line 20 fr. m. the top before and after the word *frequently* delete (and
 insert {
 " line 11 from the bottom of the note for *requires* read *requires*.
 " last line of the note after the word *subject* insert]
 " 670 line 2 from the top before the word *that* insert *and*
 " line 9 from the top before the word *most* insert *the*
 " line 11 from the top between the words *with* and *the* insert *those of*
 " 671 line 19 from the bottom for *affected* read *effected*.
 " 672 line 22 from the bottom delete " -

- „ „ line 23 from the bottom delete „
 „ 673 line 20 from the top between the words *ethnologist* and *begins* insert
 who
 „ „ line 2 from the bottom for *phonolygy* read *phonology*.
 „ 676 line 4 from the bottom for *the* read *this*
 „ 678 line 8 from the bottom of the note for *Schegels* read *Schlegels*.
 „ 680 line 17 from the top for *Ramusat* read *Remusat*.
 „ 681 line 12 from the top for *too* read *too*.
 „ 683 line 3 from the top for *with* read *will*.
 „ „ line 41 from the top after the word *native* insert *vocabularies more*
 than the native.
 „ 687 line 3 from the top for *Indiansesia* read *Indonesia*.
 „ „ line 12 from the top after the word *but* insert *the*
 „ „ line 16 from the top for *Asian* read *Arian*.
 „ „ line 16 from the bottom for *basis* read *basin*.
 „ „ line 13 from the bottom for *basis* read *basin*.

The reader is requested to correct the following errata in Chap. II, Part II. of this paper, appearing in the present No."

- Page 21 throughout for *Koech* read *Kocch*
 „ 23 2nd line from top for including read excluding
 „ 24 1st line from top for *anydep* read *a deep*
 „ „ 2nd line from top for *is* read *in*
 „ 28 2nd line from bottom for *rons* read *son*
 „ „ last line for *saces* read *aces*
 „ 29 5th line from top for then read there
 „ „ 22nd and 24th lines from top for *zygomæ* read *zygomata*.
 „ 31 2nd line from top for insignification read insignificant
 „ „ 12th line from top for *stocks* read *stock*
 „ 34 last line for *Myama-gzi* read *Myama-gyi*
 „ 35 last line for *magzi* read *magyi*
 „ 13th and 16th lines from top for *luong-thus* read *Toung-thus*
 „ „ last line for *Zuma* read *Yuma*
 „ 5th line from top for *mere* read *more*

THE KEI AND ARRU ISLANDS.*

THE following notices respecting the Kei and Arru islands are compiled from information procured from native merchants at Macassar in the habit of trading thither, and have been read to and approved by two gentlemen who have been there. The two groups are joined, because the Arru islands are in some measure dependent upon the Kei and because the trade &c. is very similar; where any striking difference has been remarked it is alluded to.

Kei is perhaps the native word for an island, or for the race which inhabits those islands, it being prefixed to the names of the villages. The principal are Ki Dulan the greater, and Ki Dulan the lesser, these and Ki Tuala are on one island. Ki Miyu and Ki Tai are on another, Ki Ha and Ki Taneba are among the principal settlements, the former is on the largest island, the latter on a separate one, on which is also Ki Bandan. The great Kei is about the size of Tanakeka, an island near Macassar, the others are nearly the same size; they are low, but the islands Tio Koa and Kasui are hilly, the hills being perhaps eight hundred feet in height.

The Arru villages, the names of which have been learnt, are Wama, the part most frequented by traders and lying in $4\frac{1}{2}^{\circ}$ south, and Sawarakai at the back of the island where the most productive banks are.

The inhabitants of both groups are chiefly Arafura. Some of the Kei men nominally profess Islam, but are unmindful of its precepts, eating forbidden meats, and indulging in intoxicating liquors. The women are stricter, so much so, that their husbands when inclined to indulge in swine's flesh, are forced to do it in secret, their wives not permitting it to be introduced into the house. Some of the Arru men call themselves Christians, but have as little claim to be considered members of that faith, as their Kei neighbours of the Mahomedan religion. It seems a general opinion that the Arafura are far better men than the professors of Christianity or Mahomedanism.

In stature they surpass the civilized natives of Celebes. The dress of the men is a piece of matting or cloth girded round the loins and drawn tight between the thighs, and a salendan or shawl. No fillet is worn round the head, the hair, which is woolly, being frizzed out like that of the Papua. The women are very scantily attired, a mat is worn in front and another behind; these are stripped off when a person of consequence dies, and the women rush

* This notice of two groupes of islands, seldom visited by European voyagers, is extracted from the Singapore Chronicle for 1836. We also subjoin a notice of the same islands, by Mr George Windsor Earl, who visited them in 1841, extracted from a Parliamentary Paper relative to Port Essington, published in 1843.

into the sea, and tumble head over heels for some time. The men are particularly jealous, but are otherwise of mild disposition, and are indifferent to abusive language, unless applied to their ancestors, or their women. Compared with many other of the Polynesian races, they are punctual observers of their engagements. They have a dialect, but Malay is understood by them. Among other customs, two appear worthy of notice; on the decease of a householder, the brazen trays, dulam or talam, are broken up; and they have great pride in ornamenting their dwellings with these utensils and with elephant's teeth.

Large quantities of *tripang* being procureable among these islands, and also some other merchandize, either the produce of them, or brought by Ceram and other craft, they are much frequented by native traders, some from Java, but the principal part from the Molucca islands and Macassar.

A vessel of about one hundred tons burthen is considered the best adapted for the trade, the crew about nineteen or twenty in number, viz—one Juragan, one writer (if the Juragan is incompetent), one Pangawa, or pilot, two Jurumudies, one Jurubatu, thirteen or fourteen Sawi Sawi, or fore-mast hands. When the prahu and the adventure do not belong to the Juragan, he is allowed two-tenths of the profits; in former times, when there was less competition, four-tenths; the pilot is paid *f*.80 for the trip or *f*.20 per mensem. The monthly wages of the others are as follow, Jurumudi *f*.8 Jurubatu *f*.7—and Sawi Sawi *f*.6 per mensem. The voyage to Macassar occupies five or six months. In some cases the ancient custom of remunerating the crew by advancing them funds to trade with is followed, but generally the preference is given to paying wages, as the people are more attentive to their duty than when they have private speculations.

When the prahus arrive they are generally hauled up under sheds built on a previous voyage, or constructed for the occasion. A small present is made to the chief; formerly *labu batu diatas tian* or anchorage fees were paid, but since the islands have been placed under the Molucca government this has been done away with. The Macassar prahus generally touch at Amboyna to dispose of part of their cargo, and to take out a pass. Business is transacted in the following manner; musters are shewn to the principal people (who are entitled Orang Kaya) and after haggling for two days at least, prices are settled, in panukur measures of tripang. The panukur is a basket which may contain about half a picul. The relative values of the different kinds of tripang, are ascertained by assuming the Koro as a standard. One panukur has been obtained for one fathom of blue and one of white calico, a cup, a plate, a bell and some other trifles. Ten has been given at Arru for half an Aum or a picul of adulterated arrack (adulterated with one-third water). When the prices have been settled, advances are made to those for whom the Orang Kaya are willing

to become responsible, and who are inclined to collect tripang or timber. The usual term of credit is 30 or 40 days, part is paid according to agreement, but accounts are seldom settled under two months. In five successive voyages performed by a Macassar Chinese, no instance occurred of non-fulfilment of contract by the Kei men. At the Arru islands men have been known to deliver produce to another trader; when such cases happen, or payment be not made, the defaulter's premises are seized and plundered by the trader, with the sanction of the chief people from the neighbouring islands who visit the station selected by the trader; from these a lela or other article is taken, to insure fulfilment of contract, as the chief at the station generally declines becoming security for the visitors.

Ceram prahus touch at both groups when trading to Papua; from them tripang, tortoise-shell, and bird's nests may be procured in barter, if the trader be acquainted, or can form an acquaintance, with the Nakodas. The Sawi Sawi have separate interests in the prahus, but as they entertain a very high respect for their leader, and implicitly pursue his example and advice, whole cargoes may be procured, and on reasonable terms, if the trader succeed in propitiating the Nakodas. If their "mouths be stopped" the affair is satisfactorily concluded. No danger need be apprehended from the men of Ceram while in port, for notwithstanding their piratical propensities, they behave with propriety, through fear of the islanders, who would immediately assist the trader in repelling violence, and would not supply the Ceram people with provisions, for which it is said some part of Ceram is in some measure dependent on the Kei Islands, which also supply the Arrus. From attacks by the islanders traders are safe; only two instances have occurred for any thing of the kind; one at the Kei, which was on account of a woman having been brutally treated; the other at the Arru Islands which were visited a few years since by Captain McLennan, now residing in the Passaruan district. This gentleman was nearly cut off, the natives got possession of his vessel, but with the assistance of the crews of some Macassar prahus he retook her, and chastised the villagers.

It has been mentioned that the Kei Islands afford supplies to the Arrus; they principally consist of sago, millet, maize, coconuts, yams and potatoes. The traders sometimes engage in this trade, using coro-coras purchased at the Kei, where there is abundance of good timber fit for ship-building. A vessel might be rebuilt here at a very trifling expense.

The traders occasionally make trips to the other islands of these groups, and also to Pandai and Alor, and Weta, Roma, Taniba and the other islands to the northward of the east end of Timor. The inhabitants of these islands are from the same stock as the Kei and Arru men. Their exports are very similar and their wants nearly the same, and trade is conducted in much the same manner.

The following list of imports and exports will shew the nature of the trade:—

European Goods.—Muskets, about 4 cases of 25 each; ammunition, 3 or 4 piculs of powder; handkerchiefs, a few; yellow handled knives, 1 cask: red broad cloth, a piece or two; Hawk's bills.

Under existing regulations the first two could only be safely procured from whalers or perhaps vessels returning from New Holland, &c. to Europe via the Molucca seas.

Indian.—Chindy Banan 50 corges.

Patola 10

Opium, 1 chest for the men of Ceram; Chelopans (the Malay name for blue calicoes, the best are got from Madras where they are called Kany Kiliwu) 10 corges.

Gunong Api.....	10 corges	
Palempores.....	3	"
Blue Moorees.....	5	"
Sarasas.....	5	"
Gaja.....	2	"
White Gurrahs.....	10	"
Chepa.....	10	" white.

Bengal calicoes principally mamudies.

Karwas, 20 corges.

Chinese.—Beads.

Brazierry.

Earthenware.—Mankup puti, Labir-batui mera, Patonko puti, Patonko mera nasi and Katuan pirin, Labir batui and mera, and dish Si Kotolo.

Paper, red, for playing cards and that called five kinds, looking glasses and colour boxes, the sixpenny ones from Europe are equally good.

Siamese or Sumatra or Malay.—Elephant's teeth, kawa kwali, boxes carved and painted, hardware, hoes, and some other agricultural implements, but few however, and gambier.

Java Goods.—Brazierry, tawa tawas, 40 or 50 of sizes and thin, Samarang wire of sizes 3 or 4 piculs, anis 5 or 6 cases, arrack 10 piculs, tobacco, 1 or 2 corges for presents.

Macassar.—A few krisses and finankes, handkerchiefs, gingham, bathing cloths and sarongs, all coarse, about 10 corges each, and 1 corgie of silk kriss belts. There are a few trifles which might be advantageously laid in, principally from China, such as some medicines, tea, sugar candy, &c.

In truck for these may be procured the following articles:—Bird's nests, mother o'pearl shells, pearls, tripang, tortoiseshell, becs' wax and timber. The bird's nests are of the description called salt water; from being collected in caves near the sea they have a red tinge, and are not in so great esteem among the Chinese.

Nearly all the varieties of tripang are found, but as the islanders do not cure it well, it only ranks the third at Macassar; the next above it is that brought in from Buton, the natives of which are not more skilful, but it is mixed with slugs cured by the fishermen in the east side of Celebes, hence it bears a higher price, as that properly cured is carefully separated, and being mixed with the tripang *bonâ fide* cured by the wandering fishermen, passes as tripang of Pulo Tinga, the islands in the Straits of Macassar &c. The largest quantity collected by a Macassar prahu was 400 piculs.

Prahus from the mode of construction are unfit for carrying timber, but rudders, steering paddles, and anchor pieces are brought to Macassar, they are made of Bayan and Santigi. Coffin pieces are also imported there. Two descriptions of wood called by the Macassar men Maratigo and Banyaro (the former quoted are Macassar names) are well adapted for masts. These are got at the Kei Islands principally.

The produce of the Arru and Kei Islands, and of those in the vicinity, renders a settlement on one of them an advantageous speculation. A Chinese, since dead, proposed to establish himself on the Arrus, taking some carpenters to superintend the construction of the necessary small craft at the Kei, these were to be merely superintendents, the islanders working willingly, well, and on the most moderate terms. The prahus were intended to supply the Arru islands with provisions from the Kei islands, and to trade from place to place among the different groups. He also intended to take with him some of the itinerant fishermen to cure the tripang as brought in, contracting with the islanders for fresh caught slugs only, whenever practicable. A man of the Molucca race, who resides among the fishermen who have settled on the islands near Macassar, advises paying off the whole or part of their debts; about 150 men, women, and children, or ten boats, generally owe f.4,000 more or less. There has never been known an instance of their absconding to avoid payment of their debts. The calculation made by him of necessary stores for an eighteen month's voyage, i. e. starting with the end of an east monsoon and returning during the second from that, is as follows:—Rice 900 piculs, katan rice 500 piculs, anis 20 cases, tobacco 1 corge, gambier 10 piculs, sugar 12 piculs, tali rami (small line, the best which comes from Engano and the west coast, where it is called pulas, of three sorts) for their nets, parangs, axes, and kawas. The Chinese who are their principal creditors act very dishonestly in their transactions with these men. So much so, that it has been known for some to be brought in debtors for more than when setting out, notwithstanding the voyage was successful. The usual mode of remuneration is by a share of the profits.

The most advantageous mode of undertaking an Arru voyage depends upon time it is commenced. If it is possible, the vessel should be at Singapore to lay in Indian goods in November (at least until

arrangements be made for their being ready here) taking in what freight could be procured; arrive here (Batavia) in all November purchase spirits and perhaps European goods, touch at Samarang for braziers and tobacco, and at Grissik for rice and braziers, filling up with freight for the eastward, and make Macassar in December; there deliver freight, employ pilot and Chinese writer and a small fast sailing prahu as a tender, and having purchased her Macassar goods sail about the 15th January. If the speculation is very large, touch at Amboyna, otherwise proceed to Kei direct. At Kei make contracts, and deliver goods where the chiefs will become responsible. Take in sago and other provisions and proceed to Arru. Sell the provisions, contract and deliver as before. Leave the writer with the tender, to receive the produce as brought in. Then stretch over to the Southern islands to try what can be done there. Return to the Arrus and Kei when the term of the contracts is about to expire. Take in return cargo. Truck with the Ceram people your opium, and if your pilot is a friend among them, and acquainted with their ports, proceed there to sell the remainder of the cargo if all has not been got off. Otherwise leave it with the tender and push on to Java, land the cargo, (the junks may not be ready to purchase) go to Macassar for the purpose of getting freighted to Java, and to take in what has been brought by the tender.

J. F. B.

The Arru Islands extend from north to south about 100 miles, but the eastern side of the group not having been surveyed, its limits in that direction are unknown; the land is only a few feet higher than the level of the sea, except in spots where patches of limestone rock rise to the height of about 20 feet; but the immense trees which cover the face of the country give it the appearance of being much more elevated. The inland parts of most of the islands consist of fresh water swamps, and the jungle is so thick that it is seldom penetrated by the natives; the communication between the different villages, all of which are erected on the sea-shore, being carried on by means of boats.

The town of Dobbe, which is built on a sandy point, extending from the north side of the island Warud, is the chief resort of the foreign traders. We found the town, which consisted of about 30 houses, some of considerable size occupied by a few Dutch traders from Macassar, about a dozen Chinese, and 300 Bugis and Macassars, the greater portion of whom were preparing to visit the island on the east side of the group, to collect produce for the vessels that were expected after the setting in of the westerly monsoon. The only sea-going vessels we met here were two large Macassar prahus and a Ceramese junk, which were about to sail in a few days. The trade of the place appears to have increased considerably of late years. Four or five ships and brigs, with a number of Macassar and Bugis prahus, whose united crews were

said to have consisted of 5,000 men, had sailed with cargoes about two months previous to our visit.

The produce of the Arru Islands consists chiefly of pearls, mother-of-pearl, tortoise-shell, birds of paradise and trepang; but the trade of Dobbe does not entirely depend upon the produce of Arru Islands alone. The Bugis prahus import large quantities of British calicoes, iron, hardware, muskets, gunpowder, &c., from Singapore; to obtain which, Dobbe is visited by the natives of Ceram, Buru, New Guinea, and of all the adjacent islands, it being the only spot in this part of the world where British manufactures can be procured. The produce brought from New Guinea consists of nutmegs, tortoise and mother-of-pearl shell, ambergris, birds of paradise, ebony, cloves and massaybark, rosamald, an odoriferous wood, and kayu buku, a wood much prized in Europe for cabinet work. British calicoes and iron are the only articles taken in exchange for these by the prahus of New Guinea.

The closeness with which the native traders conceal their commercial transactions even from each other, rendered it impossible for me to learn the amount of the exports and imports. Each Bugis prahu imports to the amount of from 10,000 to 20,000 dollars, and at least one-half of her cargo consists of British goods. Taking the yearly average at 30 prahus, and the amount of her import cargo at the lowest above stated, this will give 150,000 dollars as the annual value of British goods imported at Dobbe. This appears a large amount, but upon examination I am convinced that it is rather under than above the actual value. In fact, the greater portion of our cotton manufactures sold at Singapore are consumed in the less civilized portion of the Indian archipelago, where the natives prefer cheap goods and gaudy patterns, while those of Java select or prefer their own or Indian manufacture, which, though dearer, are far more durable than ours.

The value of the return cargo of a Bugis prahu at Singapore will be about 200 per cent on the outlay. It was with much regret that I observed a notice posted in a conspicuous place in the town, signed by the commander of the Dutch brig of war *Nautilus*, which had visited Dobbe about three months previous to our arrival, ordering the Bugis to depart from Dobbe. The Bugis certainly did not appear to heed it; but this document evinces a spirit of interference which if carried out must be severely felt at Singapore.

Of the timber of the Arru Islands there are several varieties highly spoken of by the Bugis, who build and repair prahus here, for their durability and the ease with which they are worked. Although of immense size, the trees are almost invariably sound, and as they can be felled within a few yards of the beach, it is not impossible that timber may at some future time form a valuable article of export.

The western islands of this group are thinly inhabited. Wama, although nearly 40 miles in circumference, contains only about from 200 to 300 inhabitants, who are scattered along the coast in little villages containing about half a dozen houses.

The eastern islands are said to be more thickly inhabited; the natives appear to be a harmless race, and although their country is so rich in produce, the greater portion are in a state of poverty; this is to be attributed to the inconsiderate use of spirituous liquors, large quantities of which are brought by the traders from Java and Macassar; indeed, with rice, it forms the bulk of their cargoes. From their language and personal appearance, the natives appear to be a mixture between the Malayan and the Polynesian negro. They are not many degrees further advanced in civilization than the natives of the north coast of Australia, to whom many of them bear considerable personal resemblance.

In concluding my observations on the Arru Islands, I cannot avoid remarking their favourable position for communication with Port Essington. In both monsoons the passage to and fro can be made with a fair wind, and the passage either way will never be likely to occupy a longer period than three days.

On the evening of June the 24th, we sailed for the Ki Islands, where we arrived on the 26th. The Ki group, 60 miles distant from Arru, consists of two large islands, called the Great and Lesser Ki, and a number of smaller ones lying to the north-west of the latter. The Great Ki is about 60 miles long, high and mountainous, but the Lesser Ki is nowhere more than 50 feet above the level of the sea. The natives of the islands differ very considerably, both in personal appearance and language, from those of the Arru Islands, and are evidently the same race with that inhabiting the Serwatty and Timor-laut. During our stay at Ki, the inhabitants maintained the high character they have acquired for industry and hospitality to strangers. The population is between 8,000 and 10,000.

At the Arru Islands, Christianity was introduced many years past by the Dutch of Amboyna, and nearly all the principal people there profess the Christian religion. The Ki Islands, however, appear to have been neglected by the Dutch missionaries, and the consequence is, that many of the natives have been converted by the Mahomedans of Ceram, who have several priests on the islands.

The commerce of the Ki Islands is inconsiderable when compared with that of the Arrus, attracting only about a dozen prahus annually from Celebes, Buton and Banda.

These obtain tortoiseshell and cocoanut oil in exchange for the foreign articles in general use amongst the natives on the islands. The last is the staple produce of the group, and is of superior quality.

Refreshments, in the form of yams, pigs, poultry, cocoanuts,

Indian corn and fruit, are to be obtained here in greater quantities and at a cheaper rate than on any island in these seas that I have visited. Prahus and boats of all sizes, built of the excellent timber with which the island abounds, form one of the principal articles of export; and the construction is the chief occupation of the inhabitants when they are not employed in the cultivation of their plantations. Vessels going to the Arru Islands touch here to obtain boats for trading among the smaller islands, and a large portion of the prahus navigating these seas are built here. The small boats especially are highly prized for their durability and swiftness, and it is singular that these people have hit upon a model closely resembling that adopted for fast-sailing vessels in England.

The Ki group is well situated for communication with Port Essington, as the monsoons blow fair for making the passage either way. The harbour of Ki-dulan, on the north-west side of the Lesser Ki, in which we anchored, was surveyed by Captain Stanley; it is an excellent anchorage, being sheltered to seaward by several islands of considerable extent, between which there are navigable channels.

G. W. E.

THE
JOURNAL
OF
THE INDIAN ARCHIPELAGO
AND
EASTERN ASIA.

NOTES OF A TRIP TO THE INTERIOR FROM MALACCA.

By T. BRADDELL, Esq.

ON Tuesday, the 1st February, 1853, I commenced to make preparations for a journey to Mount Ophir and the neighbouring country, returning to Malacca by way of the Moar river, and visiting the Gold Mines *en route*. Having collected the provisions, clothing, bedding, &c., necessary for an absence of 10 days, I sent them on beforehand, with the coolies, guards, &c., to Ayer Panas, the first stage, intending to follow myself the next day.

Wednesday, 3rd.—At 2.30 P.M. left Malacca in a palanquin for Ayer Panas, a distance of 15 miles. The first part of the journey leads through rich paddy and fruit tree cultivation for 6 miles, when, at Ayer Molay, the road enters the jungle, in which it continues for the remaining 9 miles. At the fourth mile we cross the Duyong river, which falls into the sea about 3 miles down the coast, to the eastward from Malacca, after draining the country from the tin mines downwards. The bed of this river is remarkably low, and the fall of water so slight that even at a distance of 6 or 7 miles inland the whole country around is inundated, except in very dry seasons, and the difficulty of drainage is so great that a basin of great natural fertility and of great extent, is rendered almost valueless by the fact of its being so

much under water. The occasion for this remark is obvious from the fact that the paddy crops in this district are as usual very inferior, while the past season has been remarkably favourable in weather for the growth of paddy, as is proved in every other district in the settlement, by a crop considerably heavier than in ordinary seasons. The cultivation immediately round the town of Malacca calls for no particular remark; it is of the ordinary description of cocoanut, betelnut, shaddock, duku, plantain trees, sirih, vegetables, &c., &c. Each house is surrounded by a few trees, but none of the campongs are of great extent,—that is, there are no extensive cocoanut estates or even large fruit gardens. I may here note an observable feature in the scenery of the suburbs of the town. There are several hills close to the town, admirably situated in every respect for building, but, from time immemorial, they have been used for Chinese burial places. Indeed, every picturesque knoll or hillock in the country, far and near, is being monopolized by these people for their dead; and as the tombs, from their peculiar structure, are noticeable objects, the whole country in the neighbourhood looks like a vast burial ground. Under the Malayan government the Chinese had a place specially set apart for themselves to live in, probably the present Bukit China, and there were allowed to bury their dead, &c. After the conquest, and up till within a very recent period, the European governments, Portuguese and Dutch, did not interfere beyond the limits of the town, so the Chinese were allowed to appropriate and ultimately to monopolize all the hills in the neighbourhood. The Chinese, formerly confined to the outskirts of the town, now possess all the valuable property in the settlement, and have taken the place and reside in the houses of the great Dutch merchants. Heeren Street, formerly the street of the wealthiest and most dignified Dutch inhabitants, is now become the fashionable and aristocratic resort of the Chinese:—to say a man lives in Heeren Street is equivalent to saying he is wealthy and fashionable.

At the sixth mile stone the road enters a tract of jungle, which has been cultivated in former years, principally with pepper. The jungle has now however grown up again. The soil is clayey on the surface, and in some places laterite is seen, but this not frequent. Judging from sections seen on the side of the road, some of the soil is friable clay and has a sufficiency of sand and quartz gravel to render it eminently adapted for the cultivation of spice and fruit trees, being of the above nature to the depth of 7 or 8 feet. The general characteristic of the Malacca territory is the want of life and bustle; the country is very thinly inhabited and the houses being chiefly on the sides of slight wooded elevations, in the immediate vicinity to paddy fields, are not visible unless when close to them: this gives an air of desolation and want of population to the whole country greater than the facts

would imply. The policy of the Dutch government here in former years was to prevent the increase of grain cultivation, so as to give a monopoly to Java. Indeed, it is said that so little did the Dutch governors do for the country that few of them ever went beyond the limits of the fortifications, and then only with an armed guard. The consequences of this line of policy are visible still, and it will require many years of the present system before Malacca can occupy her proper position as an agricultural settlement. The wealthy Chinese are happily now turning their attention to land investments, and their example will doubtless be followed by their poorer countrymen when the present unfavorable system of land tenure is amended.

From Ayer Molay, the 6th mile stone, to the 14th mile stone, there is no alteration in the appearance of the country requiring remark. At the latter place, however, we arrive again at cultivation, being near the banks of the Duyong river. There are here the two requisites for Malayan happiness,—the not steep side of a hill for his house and cocoanut trees, and, within a few feet, a patch of low level ground for his paddy. In consequence of the long wet weather the roads were in bad order, and it was therefore nearly dusk before I arrived at the station, where I found my party all ready to start the next day for Chabow.

Ayer Panas (hot water) takes its name from a hot well, which bubbles up in the centre of a paddy field, within a couple of hundred yards of the Bungalow. The water of this well is decidedly hot,—one cannot hold one's finger in it. With the air in the morning at 80° Fahr. the water in the well shewed 115°. Small globules of air are constantly being thrown up from the bottom, the water remains perfectly clear and limpid, the smell is slightly sulphureous and the taste bitter. Round the well there is a plank casing which keeps it open, and the water in the paddy field for some feet on each side is warm. I am not aware if the water is found a valuable remedy when taken internally, but in rheumatic affections some most wonderful cures have lately been effected by simple bathing. The natives also consider it to possess great virtue in cases requiring alterative treatment. Close to the well there is a furnished Bungalow which was formerly used as a Police Station, but is now within the last fortnight available for visitors. A small rent is charged, the proceeds of which are applied to the purchase of furniture, repairs, &c. If the benefits to be derived from a course of hot water treatment at this well were generally known it could not fail to attract numerous visitors, now that the Bungalow is free for their accommodation.

The Cassang Tin Mines are situated to the north of Ayer Panas, commencing at a distance of about one mile and a half, and extending in a curved line for 5 or 6 miles. These mines have been worked for many years by Malays; it was not however

till the year 1844 that the attention of Chinese miners was drawn to them, but since that time the production of tin has gone on rapidly increasing, as may be seen by the accompanying table obtained from the office of the Resident Councillor:—

Statement of quantity of Tin and amount of Farm rent produced in the Mines of Malacca during 9 years.

Years	No. of Slabs.	Weight.		Amount of Rent per Mensem.		Remarks.
		Pis.	Cs.	\$	Cts	
1844-45	273	146	73	Collected by Government		
1845-46	391	199	29	118	..	
1846-47	2,854	1,600	44	278	..	
1847-48	7,245	3,856	50	640	..	
1848-49	22,936	12,059	63	1,271	..	
1849-50	26,692	14,311	61	1,510	..	
1850-51	26,865	14,330	02	677	..	
1851-52	18,023	10,395	47	1,271	..	
1852-53	14,824	9,944	87	1,175	..	Up to the 19th February.
		2,056				Estimated till the end of the official year.

Malacca, 19th February, 1853.

In the year 1848-49 the increase was extraordinarily great under Mr Blundell's management, and remained so for 2 years, when in 1851 the Malays, attracted by the wealth accumulated by the Chinese, came down in large bodies from Rumbowe and Johole, and committed depredations to such an extent as to interfere materially with the working of the mines. As might have been expected, also, the Chinese being congregated in great numbers without any adequate supervision, became unruly, and in the beginning of last year nearly came to issue with government on the subject of the payment of excise dues; a small force was sent up, and arrangements made for the protection and government of the mining districts. A police force was established in the centre of the mines, with outposts in the interior; by these means the Malays were checked, and matters quickly assumed a healthy appearance again. The miners now pay their dues, and life and prosperity being secure, are able to turn their whole attention to working the mines. The capitalists of Malacca are more inclined to advance money, and the production is now again increasing, being up to the 19th of this month, within 450 piculs of the whole of last year's statement. In the next two months and nine days to the end of the official year, 2,000 piculs may be expected,

thus shewing a gradual recovery. In some of the late Singapore newspapers it has been asserted that, in consequence of the disturbed state of the mines, the production of tin is decreasing. This is a mistake, there has not been the slightest disturbance of any kind in the Malacca Tin Mines since January 1852. The report must refer to the mines at Sungie Ujong, a neighbouring Malay state, where from certain political reasons the produce has decreased and disturbances have been frequent of late. Lately the mines have been extending towards Matchap, in the north-west, and as the whole country between the Cassang river and the Rumbowe hills is stanniferous, there can be no immediate fear of exhausting the supplies of the metal.

The working of the Cassang mines is carried on in a very rude manner entirely by hand labour. The ore is found along the sides and bottoms of small hills, at depths varying from 10 to 20 feet from the surface. The first operation is to remove this superincumbent earth; they generally take one side of the valley first, the surface earth is carried across from the present working place and laid on the opposite side, till the ore bearing stratum is reached. This is a most tedious operation,—the men carry the earth, generally an adhesive brown clay, in small baskets, up notched beams to the surface, and then along to the place of temporary deposit. The ore is collected and placed in a heap near the washing place, till a sufficient quantity is obtained to smelt. When the ore is exhausted in the first hole they commence on the opposite side, first refilling the hole formerly dug, and then excavating and placing the new earth on the top of the lately refilled hole. From this system the appearance of the mines is in a state of constant change, the spot over which the road passes to-day may next week be either a hole 20 feet deep or a mound 20 feet high. The pits are liable to be filled with water, and require to be constantly kept free by pumping. This operation might be easily and effectually improved. In some of the mines they bale the water out with buckets, hung to one end of a slight beam, balanced in the centre on an upright post, and weighted at the opposite end. The workman stands at the level of discharge, sinks his bucket into the water under him, when filled he pushes it up, in which the balance weight at the opposite end assists, and empties the water into a channel at his feet. Another plan used is more scientific;—it is a sort of chain pump placed at an angle of about 45° or less, an endless coil of detached pieces of wood, fastened together with floats exactly fitted to a wooden channel, is worked over 2 wheels, one at the upper and one at the lower end, and the water drawn up by the floats is discharged into a channel at the head. This pump if worked by water or buffaloes, is very powerful at low elevations.

One of the chief requisites in a tin mine is a good supply of water, and in this respect the Cassang mines are favourably

situated. Numerous streams of water pass through the valleys on their course from the hills in the north to the sea. The tin ore already collected in heaps near a washing place, is thrown into a gutter, formed of planks, and placed at an angle of about 10° , to give velocity to the water which flows down; the tin being heavier than the accompanying gravel and earth rapidly sinks, while the gravel and earthy matter are carried on. Great improvements might be made here, with a view to prevent a part of the loss which must attend such a process. Many of the miners wash the earth twice, but great extra expence attends this operation. When washed, the ore, now in the form of a black, heavy, fine grained sand, is taken to the smelting house.

The furnace is a brick building, generally about 5 or 6 feet high, and 3 or 4 feet in diameter. The cold blast is used by the aid of a bellows, formed of the trunk of a large tree, hollowed out and fitted with a piston. The air is discharged from both ends, down a separate channel running outside, and along the cylinder to the centre, whence it is led into the furnace. Charcoal obtained from the neighbouring jungles is used, but nothing in the nature of a flux is considered necessary. Near the furnace a regulated number of moulds are formed to hold about half a picul each, and into these the tin is run; but, I may here add, that tin for which a government certificate is required, must be again smelted, before being exported from Malacca, under the supervision of a Government officer, who puts the E. I. C. mark on each slab, an arrangement which has been found to be of very great convenience to purchasers of tin. After smelting, the tin is sent down to Malacca, either by the Duyong or the Malacca river in small sampans. There is a royalty of 10 per cent payable to government on all tin, the produce of the British territory. This right is always farmed by Chinese,—the rate obtained monthly may be seen by reference to the table before given.

It is very difficult to obtain satisfactory information as to the per centage of tin obtained from the ore; the Chinese are very indifferent to these sort of calculations, and from the process not being continuous and carefully conducted, no certain result can be obtained. I have heard it stated that 55 per cent is about an average, sometimes it amounts to 60 per cent, and sometimes only to 50 per cent. The dross remaining after the first smelting, is pounded in mortars, and again smelted in small pans at an open fire, and a little metal is obtained. The operation of smelting is susceptible of great improvement, and there is no doubt that careful management would succeed in obtaining, with improved appliances, a much larger return.

The tools used are the universal chankal or hoe, and for hard ground a sort of pick axe, the earth from the pits is conveyed in small baskets, slung at the end of a stick carried across the shoulders; the quantity carried does not average more, each trip,

than a cubic foot of clay soil. The ore is always melted at night for obvious reasons, the difference in temperature being very great between day and night, fully 20° in the bangsals or sheds.

The chief mining undertakers (all Chinese), reside in town, and have managers at the mines, visiting themselves when ore is to be smelted, or when anything occurs out of the usual course. The work at the mines is entirely performed by Chinese labourers. These people arrive at all the ports of the Malayan Archipelago in vast numbers at the commencement of every year. Any one desiring their services, proceeds on board the junk and makes an arrangement, by which he agrees to pay the passage money to the captain of the junk, and further binds himself to feed and clothe the labourer, called a "Sinkay", for one year, the period the latter agrees to serve. After the conclusion of the year the "Sinkay" becomes a "Coolie," and is then free to remain with his first employer on a new arrangement, or take service with some one else; in either case he now works for monthly wages. The work of tin mining is very trying to the constitution, and vast numbers of these unfortunate people lose their health, and indeed their lives every year. The water coming from the neighbouring hills through dense jungles, is exceedingly cold in the early morning, and the workmen, without nourishing food, finding themselves unable to endure the shock, rush to a temporary relief in opium: this of course after a little time weakens the constitution, and general debility ensues, which prevents the sufferer from continuing his work in which case the unfortunate meets with no sympathy, his master turns him out to die on the road, thinking that he discharges his debt of humanity by cancelling the unexpired portion of time, for which he had paid for the poor creatures his services. The only assistance which can be afforded in these cases is to send the patient down to the Poor House in town, if haply he can bear the journey, when brought to the notice of the Police Authorities.

The question of the profit derived from the mines is one of great difficulty, being surrounded by so many incidents—1st, the chance of a deep or shallow bed of ore; 2nd, the chance of greater or less quantity obtained in one place; 3rd, the ability and trustworthiness of managers; 4th, the gambling and opium smoking propensities and improvidence of all concerned, from the master to the lowest Sinkay. It is beyond a doubt that large sums of money have been obtained from these mines by several individuals, sufficient, with careful management, to have put them on a level with the wealthy Chinese merchants of the town; but from whatever cause, there is hardly one of them who is able to carry on his work without assistance. The price of tin at Malacca has gradually risen within the last few years, from \$14 up to \$20 per picul, and the cost of production may be stated at from \$10 to \$14—this varies of course very much, it is rarely below

\$10, but sometimes is up to \$16 or \$18, at which cost the profit is small.

The miners are very superstitious, indeed expensively so. They imagine the tin ore is under the guardianship of demons, whom they anxiously endeavour to propitiate by offerings. Before opening a new mine, pigs and ducks are sacrificed and offered up on the shrine of "Laotse," the king of demons, and the particular demon under whose care the ore is supposed to lie. Before smelting similar observances are used, in the hope that the spirit will cause the ore to produce more tin than they might otherwise obtain. They have many ideas also about the government of their mines; formerly they would not permit any one with shoes to cross the ore streams, but now they are constrained to confine this prohibition to persons with shoes going down into the pit where the ore is lying.* They say the command extends to every description of leather, but it is much more likely to have been a politic manner of excluding Europeans, and others who wear shoes, from enquiring too much into their affairs.

Made the necessary arrangements for starting early tomorrow morning,—find that there has not been time, since sending out orders, to have the road repaired, so we shall be obliged to walk, and the ponies may be sent back to Malacca—9 p. m. retired to rest for the last time on a civilized bed.

On Thursday morning, the 3rd, collected our party and set out for Chabow, our first halting place, a distance of 15 miles. The coolies had been already sent on with baggage to wait for us there, so that there was no impediment to our getting along quickly. At $\frac{1}{2}$ past 7 o'clock set out, attended by the Constable of the Government Police Force, a body of Peons, and the Punghulus of the various districts through which the route lay.

The first mile or so of the path lay through jungle, after which detached clearings with houses appeared with more or less frequency. Most of these clearings appear to be of recent date, as they were planted with plantains, generally speaking the first crop taken off newly cleared land; there were also large tracts of fine low lying lands at the feet of the small hills, which appeared to be well adapted for paddy cultivation. The people are now again commencing to cultivate. For some years past this part of the country has been in a very disturbed state, so much so indeed as to have materially interfered with the cultivation of the soil, but fortunately now affairs are in a much better state, and life and property being more secure, the necessary consequences have followed in an increased and increasing cultivation.

The country is slightly hilly or rather undulating, the higher lands well adapted for spice, fruit trees, &c., and the lower parts

* The Sambas Chinese gold miners will not allow any person with a payong or umbrella to approach their mines.—ED.

or bottoms for paddy. The soil generally is fertile, as was evinced by the luxuriant foliage of parts recently cleared.

9 A. M. arrived at Rheim, a distance of 8 miles, and stopped there for breakfast. Being provided with a South American grass hammock, I picked out a cool shady spot, beside the mosque, and slung the hammock, one end to a tree, and the other to one of the posts of the mosque, a wooden building. Here I enjoyed myself, while breakfast was being prepared, in the delicious coolness of a strong north breeze, which came fresh and pleasant from the distant hills.

Between Rheim and Ayer Panas there are four districts, each with its mosque and establishment, Punghulu, &c., but the population is very scanty; I should not think sufficient to authorize the establishment of a mosque, which according to Malayan custom requires forty-four families.

11 A. M. packed up and started again. A little on the other side of Rheim the open ground ceases, and we entered on a tract of jungle, which ended only after an hour and three quarters smart walking,—the distance probably is 6 miles. There is no appearance of cultivation or population in this jungle, the trees are not very large, but are thickly placed with impenetrable underwood. The soil is a stiff clay, rather poor, and in some places "laterite" crops out. After leaving the jungle we came to an open and partially cultivated plain with paddy fields, some planted and others too sandy for profitable culture.

Sat down under the shade of some trees, and while our people were getting some young cocoanuts, enjoyed the fresh northerly wind blowing down from Mount Ophir, which was in front of our position, but still looked distant. The breeze was the more acceptable after our long and dull walk through the jungle, which moreover was most disagreeable from the insufferable smell of decomposed vegetable matter in the unventilated jungle.

After sitting a short time, set out again through paddy fields and swamps along the edge of the jungle. The land is low and well adapted for paddy cultivation, but the country appears to be almost deserted:—from Rheim to Chabow, a distance of about 7 miles, we saw only 3 or 4 houses and very few people. Arrived at the Punghulu's house at $\frac{1}{4}$ to 2 P. M., found that the letters, advising of my intended visit, had not yet reached Chabow, consequently no preparations had been made; however there was the shell of a new house belonging to the Punghulu's son, of which we took possession. In a few minutes the coolies arrived, (we had overtaken them on the road,) and we got cajangs to make walls, &c.; set up the camp table, chairs, &c., and got a change of clothes, &c., &c. While dinner was preparing I went out to have a look round and found we were directly opposite Bukit Moriang, a small hill on the Cassang river, and about 5 miles or so from

Mount Ophir. The outline of this hill was very singularly shaped, one part of the hill had a cleft, the W. side of which was quite perpendicular:—it bears from Chabow S. S. E. and Mount Ophir E. by N.



MOUNT OPHIR

BUKIT MORIANG

In the evening rain came on, and the consequent mist quite shut out both hills from view. The country is very thinly peopled, there is only one mosque, and I should think not more than $\frac{1}{2}$ a dozen families along the road to Mount Ophir from Rheim.

Friday, 4th.—Wakened the people at 4 A. M. in order to get breakfast ready, &c., &c., to enable us to start as early as possible. Slept very comfortably, found the camp-bed would not work, on account of being provided with the wrong legs, and so used the grass hammock, which, with the cold bracing air, and having lots of blankets, found very comfortable. On getting up found the mountain covered with thick fog, had breakfast, packed up, and started at $\frac{1}{2}$ past 6.

After leaving Chabow passed through a succession of swamps, very bad walking for about 2 miles, after which we got into the jungle, which we retained till we arrived at the foot of the mountain. The soil in this jungle is very poor, the roots of the trees are exposed on the ground, and the place was the most uninviting possible. The sharp edges of the roots of trees, exposed at every step, make walking also very unpleasant. Passed a party of 15 Malays carrying rice from Tanka to sell to the miners; the price I heard was 7 gantangs for the dollar, an advance which appears to be barely sufficient to remunerate for the labour of carriage on men's backs.

Passed Assahan; formerly, after the Naning war, there was a military post here as at Rheim, but both have long been razed and the troops withdrawn. The name of Assahan is said to be derived from a stone formerly used as a whet stone (from asah to sharpen) by the people when employed in clearing the land thereabouts. The stone is said to be still visible, but I did not go to see it. The legend is from the "Adventures of Hang Tuah," and this was one of his favourite places of resort. Another is Bukit Panchur near Alor Gajah in Naning; the summit of this hills was his favourite cock pit; here to this day may be seen the blood of his cocks and the rice used to feed them, petrified, also a stone used to sharpen the spurs, and a print of the Hang's foot, about 18 inches long. While passing along the jungle here, one of

the men remarked how fortunate we were to have had such good weather, but he was instantly checked by an elder, who then and there read him and the others a lesson on the folly of tempting the spirit of the mountain; he explained that the mountain is sacred, and that any attempt to ascend it with wicked thought, or after the commission of any offence, was certain to be followed by retributive punishment. One illustration he gave referred to the visit of a gentleman some years ago;—he killed a snake, and was seized with fever on his return to Ayer Panas, while 5 of those who had accompanied him died from sickness, caught in consequence of the snake having been killed.

At $\frac{1}{2}$ past 9 arrived at the foot of Mount Ophir, after walking a distance from Chabow of about 8 miles, the latter part through low barren jungle. Crossed the Moring river and went on to the European mine, leaving our encamping place to the right. Found the soil here exceedingly rich, a splendid undulating country, fit for any tropical cultivation, a fine rich alluvial deposit of several feet in depth, covered by 6 or 8 inches of vegetable mould, certainly the best soil I have seen in the Straits. In half an hour we arrived at the mine, found the miners, all three, laid up with fever and unable to move, gave them each a dose of quinine, and cheered them by the news that a number of their friends were coming up, and might be expected every moment. Their new house, a shed about 35 feet long, by 20 feet wide, was just finished. Went out to look about the place, found they were in a corner at the foot of a small hill (not near Mount Ophir,) which bounded the place on the east and north, the west and south being surrounded by jungle. Saw the hole where the party had been digging before being seized with fever. The first 6 feet consisted of sheer mould, such as one would see in a well in a deeply cultivated garden. After this comes a brown but friable clay, and at about 10 or 12 feet a jet black clay, exactly like coal when dried;—under this, which is called by Malays "Napal" or "Tanah Laut," sea earth, the gold is found in a seam mixed with gravel, sand and pieces of quartz, &c. While thus engaged the European miners arrived, 15 stout looking fellows, each with a musket and bayonet, and they certainly looked as if they could make good use of these weapons, if unfortunately circumstances should hereafter require. Leaving the sick men to the care of their newly arrived friends, I returned to my intended camping ground, and on arrival there at about 1 P. M. found the coolies had come up. Choosing a slightly elevated spot of ground on the banks of the Moring river, we had the grass and underwood cleared away, and set to work to cut stakes to make houses, &c., and slung the hammocks between two trees. By the time we had things a little to rights a heavy shower of rain came on, which lasted till evening with intermissions. At 2 P. M. after the first shower, crept out

of my resting place to take a look round; directly in front of us, at a distance of 2 or 3 miles, stood Mount Ophir, in all its magnificence; the atmosphere was clear after the rain, and at the top of the mountain, heavy white vapours were rushing swiftly past. On the sides were a number of what appeared to be waterfalls of exquisite beauty, perfectly white and glancing in the sun light, but on examining with the spy glass I found these were places where the rocks were bare, and some of them had vertical marks as if of quartz or some white stone;—at our distance they had an appearance between snow and silver. Numerous waterfalls were visible all along the face of the mountain. Altogether the scene was one of beauty and grandeur not easily to be forgotten, and afforded me gratification as long as the light lasted. Some of the falls must have been several hundreds of feet down the faces of rocks lying at angles of 75 or 80° from the earth's surface. When engaged in examining them a dense mass of fog would arise and in 10 seconds completely hide the hill, to show forth again as suddenly after a time.

Our camp was of a somewhat primitive form; in the centre were two grass hammocks suspended between trees, and over each hammock was a house made by driving into the ground 6 posts, 3 at each end, these were connected by 3 long sticks, and on these sticks were hung cajangs in the same way as in a Malay boat. On each side of the hammocks was a shed about 20 or 25 feet in length, made in the same way. Here our people, about 40 in all, found shelter. The Malays on such occasions make beds for themselves by laying small sticks, about 1½ or 2 inches in diameter, on the ground close to each other,—on these sticks they spread their blanket, if so fortunate as to possess such a luxury, and, rolling themselves up in its folds, appear to sleep soundly and comfortably. To our ideas the bed seems more adapted for a bag of rice than for flesh and blood, however use makes perfect. Our Botanical friend, the collector of plants for government, had however different ideas. Going out in the afternoon I saw at the end of the camp a bundle of leaves and grass about 8 or 10 feet long, and 3 feet high. On going close to examine, I found a hole, and looking in, saw my friend sitting on his haunches, with two Malays. In answer to my questions as to how he would sleep, he said he could not think of sleeping in such a place, that next night he would sleep on the top of the mountain on the dry rock, but in these muddy places he always spent the night on his haunches.

All round our camp were traces of elephants &c., a favourite watering place being close, so at nightfall 4 fires were lighted, and we went to bed. I slept very comfortably;—the cold air from the mountain was delicious, and we were not disturbed in any way.

Ascent of Mount Ophir.

Saturday morning awakened the people at $\frac{1}{2}$ past 4, to get breakfast, and prepare for our ascent. No rain, but at day light found the mountain surrounded by a dense fog. Our "Religio" informed us that he had heard the salute of two guns, usually fired from the top of the mountain, on the eve of a successful ascent. The salute was duly returned, after a wonderful amount of bowing and genuflexion, a matter in which all the native party took a warm interest, and which could have been omitted only at the risk of a misfortune.

Packed up a change of clothes, some good cajangs, and lots of blankets. Went lightly laden, as from the stories we had heard of the difficulties of the ascent, I was afraid of over-loading the men.

At $\frac{1}{2}$ past 6 A.M. set out to walk to the foot of the hill, found the ground swampy, but the soil remarkably rich, the vegetation was luxuriant to a degree I had never before seen, partly owing, perhaps, to the season of the year. Passed the tracks of elephants &c. in great numbers; in one place the lalang grass was about 7 feet high, and from the marks, the elephants must have been amusing themselves with a dance, so closely were the prints seen.

At 7.30 commenced the ascent—found it rather stiff at first, it is not easy walking for people not accustomed to it. At 8.5 got to the place where one of a party of 3, who lately went to Mount Ophir, had stopped. A sort of pen was made and the gentleman, with 2 coolies, slept there till morning, and then returned to Chabow. The jungle trees here become larger, and different to those on the plain, saw vast quantities of all manner of aromatic gums and resins &c. The path was slippery from the late rains, consequently we had to go very slowly and carefully.

At 8.40 got to top of first hill. Thermometer exposed 76°—no sun, thick fog a little above us, strong northerly wind. Observed the rock cropping out here and there, found it to be sandstone, soil inferior on the top, rich soil always better at the sides and bottom of the declivities from "detritus." Numerous tracks of elephants &c.—saw the marks, on the trees, where elephants had been rubbing themselves, sometimes they were 9 or 10 feet high. At 8.50 arrived at the place where another gentleman was obliged to stop about 2 years ago, from fatigue. He had made a stockade, for protection from the wild beasts, our Botanist accompanied both these parties, saw the marks of the fires all round the stockade.

At 9 A.M. gained the top of a narrow ledge leading along towards the large mountain, felt the full force of the breeze here. Therm. 76°;—no change in trees, no appearance of rocks, went along this ledge, or spur, for about $\frac{1}{2}$ a mile, gradually ascending, when we came to a steep descent, down which we walked for some minutes,

when, without any level ground, a very steep ascent appeared before us, part of Gunong Moriang. The appearance of the jungle here quite alters, none of the trees are more than 3 or 4 inches in diameter, all straight, with very little foliage, no shade from the sun, saw however one large fir tree, about 15 or 16 inches in diameter, but not lofty. At 10.20 sun out, but not strong, shaded by light fog, thermometer exposed $72\frac{1}{2}^{\circ}$. Strong N. wind, very cool and pleasant,—beginning now to get more accustomed to the up-hill work.

Saw a number of monkey cups, full of water, collected a quantity in a glass, found it deliciously cold and pure. Continued ascending the steep side of the hill till 10.30 when we arrived at Padang Batu, "the rocky plain." We found it however very far from being a plain, seeing that the rock lay at an angle of about 45° —went along the rock to the right, for about 200 yards, to a waterfall. Here we found the remains of a hut, and determined to rest and have breakfast. Called for the flint and steel to make fire, found the carrier had not yet arrived, waited for him, when he came struck a light, found there was no firewood,—it would have been quite against all rule to have collected wood while waiting for the flint and steel; gathered firewood and made a fire, called for rice, found that the rice coolies had left the rice behind, on examining found that some of the people had brought a little rice for private use, collected it all, found there would be enough for 2 meals, set to work to cook, and, at last, succeeded in getting hot water, and the people got their rice &c. Fog had partially cleared off, Therm. exposed 76° . Padang Batu is a sandstone rock lying at an angle of about 40° to 70° , in many places cracked, transversely to the hill, and with numerous veins of quartz from a quarter to half an inch thick, running up and down the hill and visible at irregular distances to the bottom of the precipice. The rock is very difficult of access, and, in some places, inaccessible without the numerous roots of trees and vegetable growth in the crevices of the rock. There is here also one of the numerous waterfalls visible from the plain, and there is every appearance of the whole rock being washed by water courses in rainy weather. The soil on and about the rock is a black spongy decomposed vegetable matter,—in some places, where protected, rather deep, and various curious and rare plants and shrubs are to be seen. No jungle trees on the face of the hill, but merely thin leafless shrubs.

A heavy fog continued to roll over from the North, but, to the South and West, it was clear, and we fancied we could recognize places along the Malacca shore. Saw a very beautiful monkey cup, called the "Picture plant," it was about 7 inches long, and would hold nearly a pint—when held to the light, at a little distance, it has the appearance of a coloured picture of buildings &c., seen in the magic lantern.

At 12 o'clock started again, after an hour and a half's rest, —found the hill very steep and shrubby, sun shining brightly, no shade. At 12. 15 got to the top of Gunong Tundoh, one of the three peaks seen from the Malacca side; found the summit flat, but very limited, about 15 feet long and 7 or 8 wide on the N. E., and, a few feet lower, there is another peak of even smaller dimensions. Saw Mount Ophir opposite and very close, but between us there was a deep declivity. The road instead of winding round Gunong Tundoh at the elevation of Padang Batu, which is about the same as the bottom of the declivity in front of us, comes directly to the top of the mountain, and then goes as directly down again. On descending the far side found a large overhanging sandstone rock at the side of the pathway, trees the same as on the other side, stunted shrubs, and everything had a wet marshy appearance. Soil spongy peat, and everything, trees, stones, &c., thickly covered with moss. Soon got to the bottom of the declivity, shut in from the breeze, and found the atmosphere dense, heated, and impregnated with offensive marshy odours. Although to our feelings the air was warm, by the Therm., exposed, it was 74°. At 12. 30 commenced our final ascent, found it exceedingly steep, so much so, that we were as much dependant on our hands as our feet, caught roots of trees, and branches of shrubs, and thus pulled ourselves up. The soil is only a little spongy matter which supports a poor growth of shrubs; if by any chance the trees &c. were to be burned down, the mountain would be perfectly inaccessible, as the soil, now protected by the vegetation, would be washed down the hill, leaving the bare and almost perpendicular rock. In two places, on the side of the path, there are most dangerous openings into a deep cleft in the rock, and without great care, one might inadvertently slip and fall a distance of 20 or 30 feet down the rock; the sun was very hot here, and for the first time, I had a severe headache, attended with strong throbbing on the temples; washed my forehead with brandy and felt much relieved;—sun again obscured.

At 12. 55 arrived at the hanging rock. Thermometer 74° same as in the last hollow, it was foggy and we determined to wait here, particularly as it was to be our sleeping place. The summit is about 50 or 100 feet higher. Felt most particularly tired, spread a cajang and blanket on the ground, took off my wet clothes and lay down, got a cup of tea, that sovereign refresher under such circumstances. We were lying under a remarkable overhanging rock. Like all the other rock I had seen on the hill, it is a hard sandstone, and lies north and south at an angle of about 40° to the earth's plane—it projects about 30 feet, under it is another portion of the same rock lying on a slightly sloping plane, and on this latter, about 60 feet long and 10 or 15 broad, were we to shelter ourselves during our stay. At the outer end there is a small

reservoir into which the water from the higher land finds its way by hidden channels. At this season there is no scarcity of water, we broke down the dam, let off all the water, cleaned the place, and in 10 minutes, after building up the dam, the hole was full again. No appearance of the fog clearing off to the northward, however on the south and west we had glimpses of the plain frequently.

At 3 P. M. went up to the summit, found an irregular plane, about 30 feet by 15, but unfortunately, so fringed round by fir trees and bushes as to prevent a general view. The north wind was very fierce and piercing and large drops of moisture constantly falling by evaporation from the fog overhead, sufficient to wet us. Thermometer exposed 67°. At one end of the plain, there are 2 rocks from which might be drawn a fanciful resemblance to the Mexican Teocallis. The rock is of sandstone, very hard, and covered on the S. side by a coating of conglomerated crystals of quartz, no appearance of either mica or felspar, in fact I saw no granite on the mountain or about its base. The rock was so hard as to make it a matter of no small difficulty to break pieces off for specimens, even at the sharp edges. One place is covered with initial letters of names. I was enabled to make out the following:—WTL. 1848—DL—AR—JH—BW—IF—MF—and 3 names in the Chinese character; to these were added TB and JB. The rock was so exceedingly hard that after a few blows the edge of the chisel was completely worn off. The vegetation on the top of the mountain is quite that of temperate climes, pine, fir, spruce &c., and various kinds of ferns and mosses. There is also a tree called by Malays the Glam Bukit or Mountain Glam tree, but with a smaller leaf, and different bark to the common glam of the plain, the bark of which is used for caulking native boats &c.

The Malays were very busy collecting medicinal plants and roots, for which this mountain is famous,—being unpolluted by the sound of cock-crowing, or in plain English, being very little frequented, its treasures are still unexhausted. These roots &c. are very highly valued, as is sometimes proved by the fact of rich Chinese and others sending all the way from Singapore and Malacca, at great expence, to procure supplies, when recommended by the Malayan Pawangs.

At 4 P. M. became very wet, no appearance of the fog clearing off, feeling of cold not great, except in the breeze. Thermometer exposed 66°;—went down to the overhanging rock;—one of the people brought a corked bottle, with 2 slips of paper, read the names of two gentlemen who had come up the mountain last year;—date on the paper 11th March 1852. The papers were quite dry and uninjured, restored the bottle to its place with the neck downwards.

At 4.30 under the rock, sheltered partially from the N. East

wind, thermometer exposed 68° , but when the sun shines, through the clearing of the fog, it rises to 70° in its place under the rock, about 2 feet within, in the shade. Sheltered as we are from the wind the feeling is not more cold than at Ayer Panas in the early morning:—saw a few shells, too fragile to carry, very small and transparent.

At the inner end of the floor rock there is a small stone, about 2 feet high, with a place on the top to receive a flooring beam. This is part of the residence of a celebrated hermit, Datu Tungal (the solitary), who resided here many years in the odour of sanctity till his death about 30 years ago. He dealt extensively in medicine and charms, which he used to take down to the plain, to his customers, and return with provisions &c. They also visited him, on the mountain. On one occasion, however, some of his votaries coming up could not find him, and as every practicable search was made, it was considered that he had been taken away miraculously. The body was never found. Associations such as this are calculated to make a strong impression on the Malayan mind, and taken in connection with the majestic solitary appearance of the mountain, and the difficulty of access, we can be at no loss to account for the feeling of veneration and dread attached to it by all classes of Malays. Before we started in the morning and all day long till nightfall, some of the more devout of our natives were engaged in prayer and I have no doubt that many ceremonies, the relics of an older form of worship, were performed, which would not have proved edifying to their Arab priests. We waited patiently, under the rock, for evening, in the hope that the fog would clear off, as often happens at this season. It was very tantalizing—sometimes the sun shone out brilliantly, and there was every appearance of a clear evening, but, in an instant again, every thing was dark and dismal, with the mist rushing past continuously and with great velocity from the N. E. The natives became very cold as evening advanced, and huddled together under their camblays—fortunately I had brought a number of these native blankets, as, if left to themselves, they would have made no provision for warmth.

At 5 P. M. Thermometer exposed under the rock 66° ;—it must have been several degrees lower on the top.

At 5.45 went to the top, in a sort of desperate chance to get a view, waited till nearly dusk, but a thick mist continued to rush past from the N. E. Thermometer exposed at 6 P. M. 62° :—returned to the rock, thermometer $64\frac{1}{2}^{\circ}$:—a few minutes past 6 the mist partially cleared, and in front of us, (our aspect being westerly) we saw the sea, and the Malacca coast. I could not however distinguish places, as the interval of clearness was so short. Thought I saw a ship off the mouth of the Moar river. Had dinner and made ourselves as comfortable as circumstances would admit, first I spread a cajan, thrice doubled, on the rock, on this

a blanket, also doubled, and lying down, had another blanket to cover myself. I need hardly add that I had as much clothing on, in the way of woollen socks, flannel jackets &c. as could be conveniently managed. The fog cleared off as the evening advanced, but the water from the rock overhead kept up a constant drip, drip, all night, and at one time on awakening I found it established on my pillow. There was a cajang hung in front but as, fortunately, there was no rain, it would have been better away, it only served as a funnel to collect the wind on us, in the shape of a draught. Thermometer close to my head at 9 P. M. 63° and in the morning, at 5 o'clock, at the same place, 63° . Slept very well considering, except for the water dripping from the rock, the cajang being too short, and my feet having been all night on the bare earth &c. &c. A fine clear starlight night, but at 4 or 5 A. M. a thick fog came on again, so that our prospect of a good view was bad.

6th February—5 A. M. awakened the people to get breakfast, found them not so miserable as I anticipated, they had made large fires, and huddled themselves round them during the night.

At 6. 30 had breakfast, the fog clearing off observed Gunung Tundoh W. by S. $\frac{1}{2}$ S. became colder, thermometer outside the rock 62° —went to the top, natives said it was not so cold as below; observed thermometer 63° , or one degree higher than below, but this was in the sun, and the rock below, having a western aspect, is shut out from the sun till evening.

On the road to the top saw an enormous scorpion, the first living thing "*feræ naturæ*," except swallows and sparrows, I had seen since leaving Malacca. Found the atmosphere on the top partially clear, but mist was still flying past, and the plain was only seen through a thick veil, resting about mid way to the bottom. To the eastward and north the whole country appeared to be an undulating region covered with thick forest, while towards the western or Malacca side numerous "oases" of cleared land were visible. From the fringe of fir trees growing round the table land on the summit there is no general view;—indeed it is only at the northern end that a range of even 40° can be obtained.

At 7. 30 thermometer exposed steady at $62\frac{1}{2}^{\circ}$ —the air is now quite clear and fresh, but the plain remains obscure. Observed Bukit Batang, Malacca bearing N. W. by W. $\frac{1}{2}$ W. Rumbow hills W. by N. $\frac{1}{2}$ N. and the other end at Tamping N. W. by W. Bukit Putoos W. N. W.

At 7.45, as there was no prospect of the mist clearing off altogether, and as the clouds were beginning to rise, determined to take our final departure,—thermometer exposed still $62\frac{1}{2}^{\circ}$.—Stopped a few minutes at the rock to collect the party and start the coolies, after which we began our descent, leaving the rock at 8 A. M.

At 8.29 reached the bottom of the first descent, walked quickly but carefully, holding on tightly by the roots and branches of shrubs

and looking out for holes. From the bottom we arrived at the top of the Gunong Tundoh in 5 minutes. Mount Ophir peak bears E. by N. thermometer exposed $66\frac{1}{2}^{\circ}$. The strong cold breeze was very refreshing, after the stifling and unpleasant air of the hollow. Observed the side of the mountain to be in some places almost vertical, saw enormous masses of rock exposed, some with water rushing down, at different angles from 40° to 90° . Found a yellow land shell.

At 8.30 thermometer 71° started again and 8.50 arrived at Padang Batu—found the plant collector, who had started before us, busy at work gathering plants &c.

At 9.20 arrived at the bottom of Gunong Moriāng and along the ridge, where the two gentlemen, who ascended the mountain last March, slept for a night in going up. The remains of their shanty are still to be seen on the road. Observed a part of the rock, sandstone, cropping out here, with a thin vein of quartz running up and down the hill E. N.E.—Cut two fine sticks of the “penawan opie” which is famous for making cooling applications for the head, in fever and headache. Thermometer exposed 70° , sun shining, but a cool breeze blowing across the ridge, which is thickly covered with thin high shrubs. Went on a few hundred feet and came to a descent, down which we went till 9.35, when we reached the bottom. This is the separation between Gunong Tundoh and Gunong Moriāng, as seen in the accompanying outline, taken from the sea at the Moar river.



- No. 1 Stopping place of Mr L.
- ” 2 do. do of Mr M.
- ” 3 Top of Gunong Moriāng.
- ” 4 Sleeping place of 2 gentlemen last March.
- ” 5 Padang Batu.
- ” 6 Gunong Tundoh.
- ” 7 Mount Ophir.
- ” 8 Eastern extension.

At 9.45 arrived at the top of Gunong Moriāng, crest runs N. W. and S. E. Mount Ophir bears E. thermometer $71\frac{1}{2}^{\circ}$.

At 10 A. M. arrived at stopping place of Mr M., Mount Ophir bears E. S. E. thermometer exposed 78° —continued descending

along the side of Gunong Morieng, route leading more northerly.

At 10.40 arrived at Mr L's stopping place—After leaving Mr M's stopping place the road turned to the left, or W. side of the hill, and thus shut out the breeze as well as the view of Mount Ophir.

At 10.45 commenced again and in 20 minutes or at 11.5 reached the plain, thus completing the descent in 3 hours and 5 minutes. The ascent, it will be recollected, occupied 5 hours, including one hour and a half spent at Padang Batu for rest and refreshment, in addition of course to numerous short stoppages to rest, make observations and write notes &c. Found it very hot on the plain—Thermometer in the sun 120° . Three hours before, on the top of Mount Ophir, it was $62\frac{1}{2}^{\circ}$; so that we experienced a change of 60° degrees of temperature in three hours.

At 11.35 arrived at camp after a sharp walk of half an hour, and was very happy to get into the hammock, under the cool shade of the trees.

At 1.30 had a bathe in the river, found the water deliciously cool,—having just descended from the mountain, close to us, it had not had time to be affected by the heat of the plain. Prepared to go over to visit the Europeans' hut, but a heavy shower of rain coming on, prevented me. After we had left the top of the mountain thick clouds came over, and the whole mountain was enveloped in a dense fog.

At 4 P. M. went over to the diggings, saw a little Malay boy washing, very busily, with a cocoanut shell, examined the shell and found a small quantity of gold dust in the bottom, and over it a number of crystals, purchased the latter and went to look for more, obtained some from an old man, a mata mata of Inche Allang. As I was going away the mata mata came up with an air of great mystery, holding something in his hands. I asked what was the matter, and, after some time, he handed me a bit of stone, with yellow marks at one end. He appeared to think it a great treasure, and said such stones are found very rarely, once in 7 years or so, that the yellow stuff was gold &c. &c. I examined the stone and found it to be an agglomeration of small crystals, with a coppery tinge,—the yellow marks were not mineral but an earthy colouring matter, probably yellow ochre—there was not the slightest trace of gold. The old man appeared to be disinclined to part with the stone, but, as I had been kind to him and given him a dollar, he gave it on the condition that I should send his name to "Madras." Why he wished to be celebrated at Madras I don't know, but I suppose, as there was formerly a military post garrisoned by Madras soldiers at Assahan, near his place, that he had heard them speaking of Madras, and fancied Madras to be the head quarters of our Government. I now fulfil my promise by stating that his name is "Aiyat," his title "Mantika with the moustache" and his residence the Succedano gold mine at the Moring river, near Mount Ophir. Found the Europeans going

to dinner, and therefore did not disturb them, intending to call the next morning, on my way to Jamoontah.

At 5.30 returned to camp, found an answer to a letter sent to Inche Allang at Jamoontah. The Inche had sent a messenger to escort me to his country, and promised to find accommodation at Jamoontah, and boats &c to take me down the river Moar. Determined to send back the armed escort and to go on with as few people as possible, and to this end directed the Constable to prepare to return with his people the next morning to Cassang.

Monday, 7th February, 4 A. M. The Constable awakened his party, prepared his baggage, and started at 6 A. M. At 7 A. M. I set out for Jamoontah, with 13 men, in half an hour arrived at the diggings, found the Europeans busy at work, digging a large hole at the foot of the small hill quite close to the jungle. They had got down about 14 or 15 feet, the first 10 or 12 feet consisted of a light brown alluvial earth, a very rich friable clay, or mould, then for a foot or two it became more adhesive, then came a layer of coal black clay, called "Napal," this was about 6 inches thick, under it came white clay mixed with red earth, and they expected then soon to reach the auriferous stratum of loose earth with gravel and small detached lumps of quartz. The Malays have never dug so deep as this, they generally work close to the streamlet, and expect to find the auriferous earth at a depth of 6 or 8 feet, but the Europeans, some of whom have been in California and N. S. Wales, are very clear on the necessity of going deeper, and they appear to feel satisfied that they have chosen ground, which must, if properly worked, prove very remunerative.

Went on in a North and East direction, for Jamoontah, through low swampy jungle, soil apparently very good, trees of a large size—passed through several streams, and always found mines near the water, but nearly all the mines abandoned,—out of 10 or 12 mines, only saw people, a solitary Malay perhaps, working in two. Soil uniformly brown friable clay, with quantities of broken quartz &c. at certain depths. One of the places was worked differently from the others. It was a dry mine. A number of circular holes are first dug, about 4 feet diameter, down to the auriferous level, about 6 feet in this instance, when they excavate at that level, from one hole to another: the earth is carried to the edge of the river, and there washed in gutters &c. At most of the places however they contented themselves with washing the earth found on the banks of the streams, leading the water after them, as they advance. Some of the mines were much deeper, in one instance about 20 feet, this had been worked by Chinese, they had dug out the bed of a stream to that depth, and to a considerable extent; the place was quite filled with pieces of broken quartz, of all sizes and appearances, some round white pebbles, some clear as crystals but of irregular shape, and some the ordinary quartz. We continued on in the same N. E. direc-

tion for a long time, the road was very bad, in many places we had to go, for hundreds of feet, along small sticks and trees, across swamps. All the land appeared however to be good, and well watered. Observed two very remarkable trees; one was surrounded by a very extensive and irregular, indeed fantastic, series of buttresses, winding in various directions about the tree, and reaching to a considerable distance, 25 or 30 feet, from tree itself, somewhat in this shape, the buttresses



started from a height of 20, 15 and 10 feet from the ground and gradually decreased in height, as they increased in distance from the centre of the trunk. The other was an old hollow tree;—at the root was a sort of cave about 6 or 7 feet in diameter, this had been filled with earthy matter, but was now nearly eaten away by deer, the marks of whose feet, about the size of those of a year old calf, were thickly imprinted all about. We walked on without stopping from 7 A. M. when we left the diggings, till 12 o'clock, when at last we got clear of the jungle, and by our guide's account were near Jamoontah. However we only exchanged a swampy jungle with a bad road, for a swampy jungle, with a worse road, till 1 o'clock that we reached our halting place. This, considering the nature of the road, was the hardest day's work we had,—our 6½ hours uninterrupted walking must have brought us over 20 miles.

Found Inche Allang and Tuanku Boosoh, two ordinary looking Malayan villagers of Malacca, and was received with every attention. A house had been prepared for me, at the opposite side of the yard, and into this I went at once. It was nicely matted, and taking off my wet clothes, I lay down and tried to sleep. The effects of the rapid descent from Mount Ophir, however, were now shewing themselves, my knees, and large muscles of the legs, were so painful that I could get no rest, and it was not till after a long and vigorous shampooing that I felt sufficiently relieved to obtain any rest. As the tea had not come up I had a cup of hot pepper water with sugar, which was very refreshing and much more wholesome than cocoanut or common water. At 3 o'clock in came a famous Malay curry with rice and trimmings, such as can be had no where but from the inner apartments of a real Malay house,—did ample justice to the Inche's hospitality, and now, being refreshed, I prepared to go to the hall of Audience.

Sent a messenger to state my wish to see the Inche, on which one of the Panglimas was sent over to escort me. On arriving found the place crowded with rather dirty looking Malays, walked up to the head of the room where Tunku Boosoh was seated, at the edge of a small Turkey carpet, a similar carpet being placed opposite him intended for me, and on this I squatted. Inche Allang was seated next, and below Tunku Boosoh, in deference to the latter's higher rank. Made a speech, which was listened to in silence, and when finished a sort of humming noise arose all round. Inche Allang, who occupied himself, during the interview, in cutting up a betel nut, replied, and in a short time, the business part of the meeting was concluded, when a general conversation arose. Every one appeared to be entitled to speak, and some of them gave their opinions pretty freely, and without any other deferential observance than a slight bending of the head and upper part of the body. After about an hour I retired, with the same ceremony as on entering, a lane being formed down the centre, and every one standing up. It was a necessary part of my dignity to have a following, so all my people arranged themselves near me, and took part in the ceremony, greatly to their own gratification doubtless.

On returning to the house allotted to me, and which was mine *pro tem.* and as such not liable to interference or intrusion of any kind, even from the master of the place, I had a levee. The Malays crowded to have a look at the wonderful things I had brought, and were never satisfied staring. They would seat themselves on the mat, opposite to where I was sitting, and enjoy a good hard stare, with the greatest gravity, and in total silence. Some of the "anak Rajah" however, with their cast off court airs, were sufficiently loquacious, and made up for the greater politeness and gravity of their less favoured countrymen, by squatting down, with their heads and the upper parts of the body quite bare, (court fashion) and making all manner of pert enquiries. When my dinner came, however, the excitement increased; all were anxious to see "the animal feed" and they kept constantly coming up by one door, sitting down a short time, staring in all gravity, and going down by the opposite door to make way for others.

At 6 P. M. went out to have a look round the place. The Inche's house is a plank affair, such as a 10 dollars a month Cranny would live in, at Singapore or Pinang, it was surrounded by a mud wall which is however now dilapidated and neglected. There are 3 miserable little huts outside the wall, and not another house within miles. To have collected the number of people we saw, must have exhausted the whole country for miles round. A little outside the wall there is an open space surrounded by cocoanut trees of colossal growth. I had a chair carried out there and sat down, surrounded by a great lot of the younger ones. They had no amusements. I suggested the foot ball, but they

could not play, they wanted to fight cocks, but this I forbid as improper, and, as it bounded their ideas of public amusement, there was an end of the matter. One man, who was accustomed to go to Singapore to trade, favoured me with a long tirade against the tyranny and oppression of Malay Rajahs, accompanied by a very flattering comparison with the different state of affairs in the English Territories. He said, how can the Malays improve or develop the resources of their country? If a gold miner finds a bit of gold larger than 2 mayams, it is a Royalty, and, as such, seized by the Rajahs. If a hunter shoots an elephant, it is a Royalty, and, as such, seized. If a cultivator has a very fine buffalo, or a game cock, or any thing worth taking, the Rajah steps in and seizes it; even their wives and daughters are not exempt from this system of seizing. Under such circumstances how can the country be cultivated, or population increase?

It is to be feared that the population of the Peninsula is fast decreasing. In former years, when the Malayan Kings were powerful enough to prevent the oppression and tyranny of the petty chiefs, there were large populations in all their countries, but now! where are they? Go up any of the rivers, the principal seats of Malayan population, and you find the banks for miles and miles, without a soul, and every few hundred yards you have a different local name, doubtless the name of some flourishing campong in past days. The returns of our three Settlements do not shew any increase to account for such a remarkable depopulation in even the neighbouring territory, so that the only way to account for it is the melancholy fact that the race is becoming extinct in places beyond the fostering (as compared with their own government) care of European governments.

While seated here my attention was attracted to two boys who were engaged, apart from the others, in some mysterious manipulations which soon resulted in the appearance of bubbles, blown by them into the air. They proceeded, not with our time honoured pipe bowl and dish of soap suds, but in the following manner;—one of them had a half cocoanut shell, in which was a quantity of gum, mixed with some liquid, so as to be reduced to a very thin consistency, the other dipped the end of a hollow paddy stalk into the mixture, and turning it rapidly round so as to have the stuff equally distributed over the end of the stalk, blew through the pipe in the manner of a glass blower, forcing the air bubbles, thus formed, into the air. The bubble glistened and varied its colours in a remarkable manner, in the rays of declining sun, and had a very beautiful appearance, the boy followed its course, and when falling, blew it up again, in this manner keeping it suspended in the air for some minutes, when, bursting, he blew out a fresh one. I could obtain no information as to the origin of this game, whether it had been introduced by Europeans, and

adapted in gum, or was itself indigenous. Like many other marks of civilization it may have originally been oriental and have travelled to the westward.

At 6.30 observed Mount Ophir, apparent distance about 20 miles, bearing S.W.

7 P. M.—hung up Mosquito curtains and prepared for bed under the fear that mosquitoes &c. would prevent sleep. However, was agreeably disappointed, as there were no mosquitoes, or anything else to annoy one, except that in the middle of the night a tiger commenced to growl quite close to me. I started up and on looking round, found Inche Allang's large tom cat with a cold grilled fowl, which had been left outside on the raised platform near my bed. Puss had possession of the fowl "nemine obstante" but being greedy, thought it necessary to keep up a continuous growl, to prevent others from interfering, and, in consequence, he lost his fowl. The growling in my dreams exaggerated itself into the roaring of a tiger. There is a moral in the story of puss growling and losing his prey.

Tuesday, 8th February—Awoke at 6 A. M. after a famous sleep, found my legs still stiff, but a walk will set that to rights. Inche Allang came over and asked me to stay another day with him, this I declined with many thanks, but agreed to stay till 9 o'clock. Thermometer exposed was 76° at 6 A. M.—a fine clear fresh morning, promising a hot day,—however, as our walking is now nearly over, this is not of so much consequence. Took leave of Inche Allang, and at 9.25, set out with a Panglima for guide to the Moar river. Guide said we should get sampans in the Jamoontah river, and go down in them to its confluence with the Moar river; the distance he said was very little—a mile or two, however we walked on without stopping till half past 10 o'clock. when we got to the landing place where we had to look for sampans. The course was about N. E. through as fine a country as heart could desire, splendid rich, deep, soil, capable of growing anything, fine level tracts suited for paddy, and undulating ground at higher levels with soil admirably adapted for spices, fruit trees &c. but here as elsewhere on our journey there was very little appearance of cultivation. The only sign of industry seen was on a level tract of rather high land on the bank of the river, where means had been used for irrigation. The river had been dammed up and the water led over the field. We may judge of the fertility of this soil from the fact that the brush and grass were then 3 or 4 feet high, although a crop of paddy had been taken the same season. In passing over a slight elevation near Jamoontah observed some "laterite", the first seen since we left the Rheim jungle. Waited at the landing place for half an hour to get boats. Allang had sent men on before to arrange about the boats, but of course it was too much out of rule to expect they should do any thing till we arrived. However at 11.5, the party got on board 3 small

sampans, and set out on the Jamoontah river, and a more winding disagreeable river I have never been on. The channel of the river is so slightly marked, as to make it difficult, now when the banks are overflowed, to follow the proper course, and that course was so winding that in the middle boat I had frequently in front boat No. 3—and behind boat No. 1. The channel was sometimes seen at the distance of 5 or 6 yards from us, running in an opposite direction, and before we could arrive at this place, we had perhaps to go round $\frac{1}{2}$ a mile with the bend of the river. The place was shady, however, and the comfort of sitting, after so many days jungle walking, was felt as a relief. Thermometer exposed in the boat $82\frac{1}{2}^{\circ}$. In the dry season this river, now so full as to overflow the whole country, is nearly dry. Not the slightest appearance of cultivation or population.

Noon, arrived at the mouth of the Jamoontah river where it falls into the Moar river. Here there is one house, the property of the Panglima who was escorting us. He had been warned to have his boat ready, but of course he had left it to the last minute, and now he very coolly asked me to stop till to-morrow to give him time to get his oars, &c. ready. This I refused point blank, and had my baggage put into the boat at once. When he saw I was determined to go, he commenced to get ready in earnest:—he had first to fill the boat with paddy &c. for ballast, and then to get oars, &c. ready. By dint of pushing we got ready at last, and started at $\frac{1}{4}$ past 1, but we had only got a hundred yards down when we discovered that there were too many of us for comfort. The boat was about 20 feet long by 5 broad, and there were 15 of us to sleep, eat, and work in it for 2 days. The rowers, moreover, had no room, and the top weight was dangerous, so we brought up one of the sampans, and put 4 men into it. We started finally at 1.45 P. M. Mount Ophir W. S. W. The river here is about 80 or 90 yards wide, and the current very rapid,—as we proceeded moreover we found many enormous trees lying right across the channel, where they had been blown down, and left without any attempt to clear the way. This made the navigation difficult, and at night positively dangerous. A little below the Jamoontah confluence, we saw a narrow channel of about 3 feet wide, with a strong rush of water down it into another river, separate from us about 6 feet, we came to the place again after a long winding. A little labour expended here, the next dry weather, would cut off 2 or 3 miles distance in the navigation.

2.30. Left bank Qualla Segamet, the residence of the Tumongong of Moar. This place, with several others about here, is at present "tabooed," on account of small pox, or as the Malays express it "putchoh," that is, 2 sticks are set up, and, from a string hung across them, a number of "putchoh" or leaves are hung, as a sign interdicting the approach of any one. It is said that 3 out of 10 of the people along the banks of the river about here have lately

died from small pox. The Tumongong himself, at this time, was suffering from the disease and could see no one. The place (Segamet) had a melancholy deathlike air about it. There were about $\frac{1}{2}$ a dozen houses, but we did not see any one moving about. The present Tumongong is a young man, who had been raised to the dignity by Tuanku Boosoh and Inche Allang, at the decease of his relative Tuanku Syed the late Tumongong, but he has not been instituted properly. He is very young, and being quite unacquainted with affairs, is in the hands of his uncle Tuanku Boosoh and Inche Allang so that his authority is not much respected. The residence of Tuanku Boosoh is a short distance up the Segamet river, but he fled from his people, from fear of the small pox, and is now residing temporarily with his son-in-law and relative, Inche Allang, at Jamoontah.

There are a few cocoanut and betelnut trees at Segamet, but apparently nothing beyond this.

2. 50—left bank Tipping Tinghie—uninhabited now, but there are great numbers of fine doorian and other trees planted by former occupiers. The soil, as seen in section on the bank of the river, is a deep friable clay, under a vegetable mould of 2 or 3 feet in depth.

3—left bank Mandoh, a few miserable huts on the bank of the river. Two months ago a remarkable tragedy occurred here. Two medicine men, Lebby Serepan and Ismail, were, together, attending small pox patients. They were both a little cracked, one of the two requested the other to kill him with his chinangkak (a chopping sword), which the other as readily did, cutting his head nearly off at a blow. The relations of the deceased were not satisfied with the account of the transaction given to them, as to deceased having consented to his own death, and, in consequence, they killed the survivor.

3.10—Right bank Bukit Segantang—inhabited by people from Borneo, high banks—not many houses visible, fine jungle, river about 60 yards wide, current very rapid—general direction here changes to S. W. The river, now so full and rapid, is said to be nearly empty in dry weather, and exposes a fine clear sandy bottom. One of our boatmen has been 2 months coming down the river from Jompole, its source, with tin, in dry weather.

3. 20—Looboo Limau Manis, a deep indent, like the confluence of another river, no inhabitants, banks of river cleared, large forest inside.

4—Tanjong Pootoos, very fine jungle, no inhabitants, general direction S. W.

4. 20—Right bank Tanjong Pootoos Bankong, a low swamp with only one house;—stopped here to cook, ground overflowed, no cultivation, used as a stopping place, found a number of boats in the creek, current still very strong. Mount Ophir not visible since we left Qualla Jamoontah, probable speed 6 miles

an hour, as we had 2 sets of oarsmen, one to relieve the other, probable distance from Qualla Jamoontah to Tanjong Pootoos Bankong 15 miles.

6. 15—finished dinner, and started again. Had a grand pumpkin curry, part cargo pumpkins. On backing out of the creek were carried some distance down the river broadside on, before we could turn the boat properly, and then found ourselves close to a large tree lying across the river, with only one small passage for a boat. It put one in mind of the original navigators of the American rivers shooting past snags and sawyers &c.

6. 20. Right bank Teluk Kamoodie, no inhabitants.

6. 30. Right bank Biawah, no inhabitants.

6. 35. Left bank Suka Menanti.

It began now to be dark, so I could not write any longer. The other observations of this night were written in the morning.

Our Panglima was earnest for me to stop here and sleep till morning, representing the extreme danger of the navigation &c., however, as I thought we were over the worst of it, I refused to stop, and as he was sleepy, having been up to a late hour the previous night discussing matters with Inche Allang &c., I relieved him from the helm, one of my own people knowing the river a little. The sampat, provided with a dammar torch, was sent on a-head as pilot, and we followed the light. In this way we got on pretty well; sleep was out of the question, as there was a continuous screeching of Right, Left, Left, Right, Right, Right, Right &c., ad infinitum, the same being steering directions from the look out man a-head to our helmsman. At 8 P. M. an open plain, Padang Tooie, on the left bank, but with no inhabitants. The jungle hereabouts is not so large. About 9 Bukit Kippong on the left bank, a few small houses, and on the right bank, a little lower, Trusan Labis, open plain, no people.

10. 30. Arrived at Penkallang Kotah. I had been dosing and on looking up, saw a very bright red reflecting lamp, on shore in a house, with a number of other houses near it. In the clear starry night this place formed a most enchanting picture; the numerous houses, the cultivated banks, the fruit trees, plantains, cocoanuts &c. gave it a very enticing appearance and I almost felt tempted to stay till morning. On the left bank of the river there is very remarkable tree;—from the upper side it is fantastic in shape, very bushy, and stands clear out by itself in the river; as it appeared while seen from the lower side it was a most perfect resemblance of a tiger's head, with open mouth. The Rajah's house is on the right bank, on a point which appeared to be formed by a deep indentation in the river.

This place was formerly the residence of the Tumongongs of Moar, but on the death of the last Tumongong in 1847, it became the inheritance of his sister, who had married Tuanku Johoh, the present Tumongong removing up the river to Qualla Segamet.

Some years ago Tuanku Johoh, a Bugis Prince, son of Rajah Kraing, (this word appears more like a title than a name) came over to the Straits, on a trading expedition; he was unfortunate and having lost all his money, was ashamed to return to his own country; so, being in the Moar at Penkallang Kotah, he determined to settle, and marrying the Tumongong's sister, on that prince's death succeeded to his wife's portion. There are said to be a great many Bugis with Rajah Johoh, and he is permitted to govern his country without interference. It certainly is the only place on the river, above or below it, where there was seen the slightest trace of cultivation or industry. Probable distance from Tanjong Pootos Bankong, 4 hours and a quarter, at 6 miles an hour, say 25 miles, add to Jamoontah 15 miles, total distance from Jamoontah to Penkallang Kotah 40 miles, Loo-boo Soolah, left bank, no inhabitants, small jungle. Naga Moo-lah, right bank, paddy fields and a few houses. A little below this, there is a work which would do honour to a more advanced race. The river makes a long bend and at one place the two parts approach to within 50 or 60 yards of each other, this neck is cut through and the channel of the river, hereabouts 200 yards wide, is altered. We passed at night so could not distinguish whether the cut was artificial, or natural from the bursting through of the water itself. The probability is, that a small channel was dug in the dry season and the water, getting into this, gradually washed away the earth till it had formed a sufficient channel for the river. The cut is about 60 yards long, and 100 yards wide, and saves about 2 hours in the passage down. Campong Pawang, right bank, a hill with a few houses.

Linga, left bank, small jungle, houses inside.

4 A. M. Wednesday, 9th February, awakened by a very smart shock, jumped up and found the boat broadside on and capsizing, but fortunately she was brought up. Found we had gone full speed on the Liang Batu, a celebrated rock in the centre of the river, here 150 yards wide, and 7 or 8 fathoms deep. This rock is looked on with great veneration by the Malays. In former times Nakodah Raggam threw over the ballast from his vessel here, and it became "betuah" and increased in size, till it appeared at the surface. Our Panglima was clamorous on the subject of our having struck on it, he says he and others have been passing up and down that river for years, and no one ever struck on it before, and that it bodes some good or evil to him. He quite forgot that he was in the habit of passing it by day-light, and not with a sleepy crew and steersman at 4 A. M. after a hard night's work. The pilot boat men say they called out, but as he was half asleep, he did not hear them. The first extraordinary event either for good or evil which occurs to our friend, within the next 3 or 4 years, will be attributed to the Liang Batu, and, consequently, the sanctity of that rock will be increased.

The above named Nakodah Raggem was the husband of the more celebrated Putri Gunong, (or as it was at that time Pulo Ledang. Pulo means island, the tradition being that Mount Ophir was formerly surrounded by the sea). One day the Putri was sewing, and her husband, who was sitting with her in the vessel's cabin, commenced to tease her, she told him to let her alone, but persisting, his finger was pricked by her needle. Unfortunately he died from the wound the same day, she concealed his death, and coming on deck ordered the Juragon (sailing Captain) to put her ashore on the Island of Mount Ophir, to bathe; she went on shore, and disappearing, all search for her proved vain. The Putri sanctified the island, and she resided for many years between it and the Rumbowe hills. It is on account of her bounty that gold is found at Mount Ophir, and that every person sleeping on the mountain is blessed with pleasant dreams of fairy-princesses &c. &c. No one ever dreams of men and their doings, when on Mount Ophir.

On the left bank at Liang Batu there are paddy fields with a few houses. The rock is in the centre of the river, it has two peaks above water, we struck between the two, and the men getting out on the rock were able to keep the boat steady and push her off before we were quite over. At first the Panglima thought it was an elephant, on whose back we had struck, and he looked about for his kris, but of course it being wanted, was not to be found. Probable distance from Penkallang Kotah $5\frac{1}{2}$ hours at 5 miles—27 miles, added to 40, total from Quallah Jamoontah 67 miles.

Sungie Issah, left bank, hill, a few houses, large jungle, the river about 200 yards wide, current not so strong as before. At this place there is a Batu Hampar, that is a flat rock "spread" over the channel or rather the river passes over a rocky bottom. It was not visible as the river was very full.

5. 30. Pagoh, a large campong on the left bank, with houses and population.

6. Panchur, left bank, formerly a populous village, but now deserted, there are large groves of valuable durian and mangosteen trees, the property of its former inhabitants.

7. 15. Sungie Tampayang, left bank, one or two houses, here we had a splendid view of Mount Ophir, for the first time since leaving Quallah Jamoontah. It appears very distant—peak bears N. W. by N. Current now nearly slack, tide rising.

7. 25. Stopped to cook, the tide being against us. The last part of the journey from Liang Batu we have not had the current strong with us, the speed may be calculated at 4 miles an hour which would shew from 4 A. M. to 7. 15 A. M. 3 hours $\frac{1}{2}$, say 3 hours, at 4 miles, 12 miles, add from Jamoonath 67—total from Jamoontah to Sungie Tampayang 79 miles and 1 more to Gressik, makes 80 miles from Qualla Jamoontah to Gressik.

9. 30. The people returned from the shore, having boiled their rice. They say that on landing 10 elephants were on the plain, within 20 yards, and would hardly move from them.

9. 45. Started again expecting to meet the gun boat at Gressik, tide strong against us, with a head wind. Passed along the Gressik lands, high banks, splendid jungle inside, lots of wild nutmeg trees on the banks of the river. Observed the heads of the cocoanut trees all cut off, said to have been done by the owners. As they could not live in the country from extortion and oppression they determined to leave nothing behind them on going away. It is melancholy after hearing stories of misgovernment and rapacity to find them borne out by such proofs, and indeed no one can behold the country of the Moar, 80 miles of which we had traversed and found to be unequalled for fruitful soil and general advantages, without feeling regret that no remedy can be discovered for such an unfortunately state of affairs.

10. 45. Gressik, found the gun boat, and was delighted to exchange my Malay boat for the spacious deck and, by comparison, magnificent accommodation of the "Nancy". I was glad also to see the genial face of her intelligent commander after so many days of Malayan doings in the jungle. While waiting for the turn of tide a miserable little old man came off in a canoe without a paddle, his name was Tungal, and he said he was the Panglima Dalam of the Punghulu Besar of Gressik. He collects the three gentlemen who went to shoot elephants in the Moar 4 years ago, and was full of wonder at their tremendous prowess &c.

11 35. Got up anchor and started, fresh breeze with us. River very clear, deep and wide, might float a line of battle ship here.

11. 55. Ring river falls in on right side, and Gressik river on left side, up both of these rivers there are paddy fields and a few cultivators. Ring, however, has the greater population and cultivation. Saw Mount Ophir, a little below Ring, bearing N., strong breeze carrying us on at the rate of 5 miles an hour.

Towards the afternoon breeze slackened, and we commenced to row, continued till 7 P. M. when the tide making strong, we anchored; from $\frac{1}{2}$ past 11 till 7 P. M. we must have gone 2 hours at 4 miles, 2 hours, at 3 miles, and $3\frac{1}{2}$ hours, at 2 miles or total 20 miles. Spread the awning, put up a side curtain, got a matress on deck and took off 12 hours of sleep without a check and in the morning felt quite well. The long continued discomfort at night, the bad and ever changing jungle water, constant wet clothes and badly cooked food, had rather knocked me up, but this 12 hours on the deck of the gun boat revived me completely. In coming down the river where we had dinner the previous day I had a cold and sore throat from wet feet. The cold had been kept off by constant moving about, but the sore throat was

rather increasing as evening advanced, so I asked the Panglima if the Malays had any medicine for sore throat. He said, yes, they steep a fish hook in a little water and drink the water. This appeared to be curious and simple, so I got a common Malay fish hook, brass, put it into a tumbler and pouring a little water on it left it to steep for a few minutes, and then drank off the water. This was at 6 P. M. and in the morning the sore throat was gone, and has not since returned. I don't know what the Doctors will say to this, I only tell it as it happened. I may add however that at the same time I had a curry hot enough to burn a throat lined with iron, and that I wrapped myself well up in blankets during the night. At midnight the boat started again and arrived at the mouth of the river at 4 A. M., but we were obliged to anchor, as there was not enough water on the bar to pass out at once. Were it not for this bar the Moar river would be navigable for vessels of 200 or 300 tons up to Penkallang Kotah at least. The distance passed over between midnight and 4 A. M. may be about 8 miles, added to 20, gives 28 from mouth of the river to Gressik, and from Gressik to Jamoontah 80, or total from mouth of the river to Quallah Jamoontah 108 miles. These distances of course are merely rough estimates and are not to be depended on. From the winding nature of the river and the bearings of Quallah Jamoontah it is not probable that the whole course of the river, taking a straight line along the known chief bend about Bukit Segantang can be more than 50 miles from that Quallah to the sea.

From the mouth of the river Mount Ophir bears N. by E.

6. A. M. Got under weigh with a fine N. E. wind, and ran up the coast for half an hour, till opposite Tanjong Gading, the residence of Tuanku Purboo, mother of Tuanku Ali, eldest son of the late Sultan of Johore.

Went on shore, found Her Highness living in a comfortable, but small plank house, with her daughter Tuanku Sabriah. The old lady was very vivacious, and appeared to be intelligent and quite able to look after her own affairs, very few houses or people about her. After an hour's chat left again, on the beach we saw a swarm of plover, so many as actually to blacken and hide the ground, a gun fired among them would have killed 50 or 60 at a shot,—had no gun, so we left them alone and went on board.

9. 35. Got under weigh again with a strong N. E. breeze, reefed fore and main-sail and at $\frac{1}{2}$ past 12 got up to Pulo Jawa, at Malacca, or a distance of upwards of 25 miles in 3 hours in a small boat of about 35 tons, and thus ended a trip which occupied exactly 8 days.

CHAPTER IV.

GENERAL CHARACTERS OF THE BURMA-TIBETAN, GANGETIC AND
DRAVIDIAN LANGUAGES.

To illustrate the transition from the Chinese and Ultraindian to the Indian and Tibetan formations, I have not given a separate place to the Burman, but have included it in the monosyllabic as well as in the Tibeto-Indian groups. If I could assume that the Burma-Tibetan and S. Indian languages were nowhere or in no degree directly connected, I should at once proceed to examine each as a distinct alliance. But some of the intermediate languages have affinities so decided with both, that a separation of the two groups thus connected cannot be satisfactorily established without first considering them together. The extension of both the Burman and Tibetan systems into India will always render it advisable, for many purposes, to embrace the whole in one view.

The non-Arian languages of India, from their Tibetan and Tibeto-Burman members on the N. E. to the Tamīl in the extreme south, have many features in common, and in their ideologies appear to be distinguished from each other more by culture or development than by organism. Their words are generally crude; they have a decided dissyllabic tendency; they make a great use of particles to express relations and genera; the more abstract of these have a common indefiniteness in their application; above all, their collocation has a remarkable agreement, and strikes us the more from being, in most respects, the reverse of our own, so that we cannot at first follow an Indian sentence till we read it, or most of its component parts, backwards.

But the discordances are almost as strongly marked as the affinities. The Tibetan and Tibeto-Burman when compared with the Tamīl present a great contrast. The former abound in monosyllables; their words seldom exceed two syllables; the syllables have little or no cohesion; words do not unite; euphony is little studied; and inflexions are rare or absent. The Tamīl, on the other hand, has great powers of combination; its words and particles have a strong agglomerative tendency; euphonic and flexional changes are very abundant; and the agglomerations form real phonetic unions. The difference therefore is mainly a phonetic one. The phonology of the south is advanced, plastic and energetic, while that of the Tibeto-Burman languages has hardly wakened into life and motion.

The intermediate languages present few traits that are not found in the groups at the two extremities, and if we confined our view to India, and the physical characteristics of the indigenous tribes from the Himalaya to Cape Comorin agreed as remarkably as their languages, the only question would at first be, whether evidences could be traced of a gradual phonetic develop-

ment from the north to the south. But the S. Indians form a complete physical contrast to the Tibetan and Tibeto-Burman tribes, and their language has a closer agreement, phonetic as well as ideologic, with some foreign tongues than with the Tibeto-Burman. The S. Indians present at least as great an aspect of Indian antiquity as the Tibeto-Burman tribes. If the one race occupy the most retired portions of the N. and N. E., the other fill the southern extremity to the sea. There is no reason for supposing that the Tamulian phonology is not as essential to the Tamil language as the Tibetan is to that of Tibet. If we believe that the latter was crude and non-accented in the mouths of the family from which the race that now speak it have descended, we must believe also that the harmonic and flexional phonology of the Telugu-Tamulian tribes was that of their parent family, wherever it originated. The two races being essentially different, physically and intellectually, we have no right to assume that their languages, with phonologies so distinct, have any direct and close connection. The collocation belongs to a class which embraces a large portion of the globe, and there are even some ideologic features which bring the Tamil nearer to remote Mid-Asian, northern Aso-European and Asonesian languages, than to the Burma-Tibetan. For any thing we can gather from the collocation alone, the geographical proximity of the Tibetan and Dravirian may be accidental and their affinities may belong to an archaic era when the ethnic roots of both were far removed in space. Assuming that the two languages have been brought into India by different races, the question then arises whether, amongst the intermediate languages, remnants of other distinct pre-Arian formations are to be found, and a principal object of the details that will now be given is to furnish an answer to this question. *

Sec. 1st. TIBETAN AND BURMAN.†

Tibetan, in many respects, takes a place between the Burman and the more advanced postpositional languages. Compared with

* Although the object is ethnological, the present chapter in general, deals with the Tibeto-Ultrindian and Indian languages ethnographically. In the succeeding chapters I shall endeavour to take a more extended and ethnological view of the great linguistic formations which have successively prevailed in India and Ultrindia.

In the 1st Section I have selected Burman for comparison with Tibetan, because it is the only language of the Tibeto-Ultrindian alliance that has been well investigated, and because, as will appear in the sequel, it has been less influenced by the Chino-Ultrindian or Dravirian formations than the Karen, or the languages of the Yuma, and Naga-Nipal groups. A further reason is its close connection with Singpho, which, from its prevalence in the Upper Irawadi basin, is geographically the nearest of the known Tibeto-Ultrindian languages to Tibetan.

† Principal authorities: *Burman*—See previous references. *Tibetan*:—Csoma de Koros, "Grammar of the Tibetan language"; Abel-Remusat, "Recherches sur les langues Tartares"; W. Robinson, "Notes on the languages spoken by the various tribes inhabiting the valley of Assam and its mountain confines," *J. A. S.* xviii. 1. 194 (1849); B. H. Hodgson, "On the Aborigines of Nor-Eastern India" *ib.* 451 (with comparative vocabularies of spoken and written Tibetan.)

the latter, it is distinguished phonetically by its consonantal combinations, which, however, are greatly softened and even obliterated in the speech of the cultured communities, and by an absence of accents which prevents the phonetic fusion or composition of words. In this respect, as in the complex consonants, it approximates to the Burman, which, in common with the other tonic languages, is devoid of that great cause of linguistic development, the habit of impressing ideologic unions and intimate connexions on language by a phonetic unitising of words. But an adaptation of sounds to each other may be remarked in the change of some of the postfixes with that of the preceding letter. Thus the possessive postfix is *hi*, *kʏi*, *khi*, *khyi* or *yi*, according to the preceding vowel; and the transitive and locative is *tu*, *du*, *ru* or *su*. Many of the particles, segregative, definitive, emphatic and relational, have variable phonetic forms. The phonology, as a whole, is evidently in a transition state. It is, in many respects, unfixed, arbitrary and obscure. The ancient strongly articulated and complex sounds are being lost. The cultivated dialect exhibits an extraordinary phonetic degeneracy. Many distinct letters have now the same sound, shewing that the articulative energy must have decayed since the introduction of the alphabet. The ancient Tibetan phonology differed greatly from the modern Burman in its sonant tendencies and in the variety of its consonantal finals. The modern written language has ten simple finals, four of which are made compound by adding the sibilant. These are *n*, *ng*, *m*; *g*; *d*; *r*, *l*; *s*, *h*; *b*; *ngs*, *ms*, *gs*, *bs*. The absence of the surd *k*, *t* and *p* of the Ultraiidian and Chinese phonologies, is not less remarkable than the presence of the sonant *g* and *d*, which must be considered as representing *k* and *t*. The ancient written language had also the compound liquid-dental finals *nd*, *rd*, *ld*; *nt*, *rt*, *lt*. In the modern spoken dialect the sonant tendency has disappeared, and the ancient sonants, as well as the aspirated surds, have nearly the same pronunciation as the simple surds. Many of the initial consonants are complex, and their complexity is further increased by the use of five prefixal letters, which are always written but are seldom pronounced, although they are, in reality, formatives. These prefixes are all sonants, *g*, *d*, *b* or *v*, *m*, *h*. Besides these formative prefixes, the liquids *l*, *r* and *s* or *z*, are prefixed, and *r*, *l*, *y*, postfixed to other consonants. Like the formative prefixes they are now silent in the polished spoken dialect but are preserved in the written. In Kombo and Sifan, that is in Khampa, the silent letters are still pronounced.

The following are examples of the consonantal combinations, the silent letters of the polished or Lhasa dialect being italicised;—*qtsang*, *dgu*, *bzhugs*, *mchurings*, *kbrumar*, *kdug*, *kgro*, *smros*, *lchags* *brjog*, *ltogs*, *bsams*, *kphra*, *brgya*, *bsgra*.

Like all the S. E. Asian languages, Tibetan has aspirated consonants, *kh*, *chh*, *th*, *ph*; and, like Chinese and Burman, it has also

sibilant forms, *ts, tsh, ds, zh, sh*. These sibilants, the Italian *gn*,* the initial *h* before other consonants, and the power of abruptly combining consonants, connect the earlier Tibetan with the earlier Burman phonologies. Both systems have become highly emasculated, but the Burman in a much greater degree than the Tibetan.

In the spoken dialect, the old or written final *g* is changed to *k* and sometimes *ng*, while occasionally it is elided or vocalised; *d* is elided or vocalised; *b* is changed to *p*; *n* to *ng*, but the reverse also takes place, all the nasals being favorite terminals in the spoken as well as in the written language; *s* is vocalised or elided; initial *gr* becomes *gy*; initial *d* and *dr* are changed to *th*. Ex. (*written*) phag (*spoken*) pak; mig, mik; lag, laugo; *hdug*, deh; gyug, gyuge; *brgyud*, gye; *bgad*, ga; *hchhod*, chwe; *bzhib*, hip; *knab*, gnab; nyam, nyen; dran, thang; *gnyis*, nyi; *ichags*, chhya; gro, gyo; dengtse, thanda.

100 words give the following finals:—

	vowels	<i>ng</i>	<i>n</i>	<i>m</i>	<i>k</i>	<i>g</i>	<i>d</i>	<i>l</i>	<i>r</i>	<i>s</i>	<i>h</i>	<i>p</i>	<i>b</i>
Wr.	50	13	7	5	—	10	3	1	5	4	1	—	50
Sp.	57	9	6	9	11	1	—	—	5	—	—	2	43

From this it appears that the nasals form nearly one-half of the consonant terminals, the gutturals one-fifth, and *r* one-tenth; the other sounds being comparatively rare, with the exception of *s* in the written language. Of the 4 *s* finals, only 1 is simple *s*, the others being *gs* 2, and *ms* 1.

The crudeness of the Tibetan phonology is also marked by the absence of that vocalic harmony, which is so distinguishing an attribute of the northern members of the postpositional alliance, from Hungary to Japan. It is further connected with the adjacent languages to the S. E. by the number of its monosyllabic words, and, as a consequence, of its homophons. The loss of the tones is the principal fundamental difference between Tibetan and Burman, for all the grand characteristics of the postpositional formation are found as well marked in the latter as in the former. The Burman, however, combines with these characteristics several prominent ones which connect it with the other Ultratindian languages and the Chinese. Such are the tones, which, reduced though they are to two, the light and grave, serve to preserve a monosyllabic character and prevent the decided dissyllabic form which the language would at once assume if they were lost. Such, also, are the segregative or generic particles. I would add the use of double words, that is, of two words synonymous or nearly so, if I were not satisfied that a large portion of the vocables of the Tibetan, and of other more decidedly dissyllabic languages, are also similar double words, the constituent parts of which have, in general, ceased to be used, or to have a meaning, separately.

These remarks being premised, there remains little that can be

* (Nya or nia) of the Malay alphabet.

considered as peculiar to the Tibetan when compared with Burman, or even with the rest of the cruder postpositional languages. The ideology is the same. Words are either crudes or capable of conversion from one form to another by postplaced particles; the collocation is inverse; the action word has generally a nominal or participial form; a succession of connected principal words have a common relational word or particle, or an action word, placed after the last;* the particles indicative of the direction and time of an action have a less restricted meaning than in more advanced languages, the same particle, for instance, being applicable to present and future, and some directives indicating motion (actual or ideal) *from* and *to*, as well as its consequence, rest *at*, *in* or *on*, an object.† The particles are numerous and much compounded, so that in these languages we find the basis of the agglomerative formatives of the Scythic, American, Euskarian and African systems.

The power of building up sentences by a succession of crude words, which become connected by the retroaction of a final accessory or action word, is exhibited, in an opposite direction, in the sequence of several particles or auxiliary words, which are cemented by the preplaced principal word of which they are serviles. It is in this mode that the more complex expressions of time are form-

* This power of stringing crudes together, and treating the whole as one utterance or word, for the purposes of indicating relation, is also a trait of the allied Scythico-Japanese and even of the American ideology, the only peculiarity of which, in this respect, appears to be the extent to which it can give a closer phonetic unity to the expression, by throwing off non-essential, servile or amissive parts of polysyllabic words. It thus adds phonetic to ideologic unity. But the same trait is necessarily exhibited, in some degree, by every other language of the same class in which the phonology is fluent. Examples may be found in every linguistic region, as in Japan, Australia, India &c. The American languages differ from the Burman in their phonetic power, more than in their ideology. The Indo-European and Semitic families also exhibit the same power in some of their members (e. g. Sanskrit, Greek), but the predominating habit of indicating relations in each of the separate principal words is antagonistic to the long root-aggregations and agglutinations of the earlier languages of the same development as the Indo-Germanic basis, (the Burman, Tibetan, Tamulian, Ugro-Tartarian, Japan, Australian, American &c.)

† In Tibetan the directives which would be case-ending if the phonology were more advanced are the possessive, transitive or locative, and agentive or instrumental. The first serves also as a qualitative postfix, that is, qualitatives are substantives considered as possessive. The second is at once transitive (*to*, *into* &c.) and purely locative (*at*, *in*, *on*.)

The instrumental or agentive is *s*. In the purely instrumental form it is postfixed to the possessive particle. Postfixed to the locative or ad-transitive (*to*) it renders it ex-transitive (*from*). Postfixed to words used actively, it makes them past or completive. These various uses appear to be referable to its radically active and hence intensive power. Active and causal verbs take the instrumental particle, that is, the action is made passive or possessive in form, as in Malayu-Polynesian. Ex. "by me the house was built" for "I built the house"; but the instrumental being simply the possessive with the active sign, the expression is, "mine (act.) the building (past or comp.) the house", "mine was the house building."

The other directives are merely substantives, and in no way distinguished from other substantives save in their more frequent use. Their substantial character is proved by their following the possessive postfix, e. g. *khang-pi nang-du*, literally, "house-of interior-to", to the interior of the house, i. e. *into* the house.

ed. The Burman has also great power in this respect and admirably analyses the Indo-European ideology. In Burman even a succession of proper names may be treated as a unity, and take the plural postparticle *-do*. So a succession of substantives take the indefinite plural *-mya*. The directive (case) particles follow the plural ones.*

The only remarkable departure of the Tibetan and Burman from the Ugro-Tatar collocation is the placing of the qualitative after the substantive, which is the more worthy of notice from the Chinese and Tamulian agreeing, in this respect, with the Tatar, while the Ultratindian (including Burman) and the Asonesian languages agree with the Tibetan.

Another feature requiring remark, is the considerable use that is made in Tibetan of postpositional monosyllabic particles as definite and indefinite articles. All or most of these are reducible to variations of two words primarily signifying man (*pa*, *po*), and woman (*ma*, *mo*), or male and female, and a third (*ka*, *ga* &c.) applied to inanimate substances.† In particles such as these we see the origin of masculine, feminine and neuter postflexions, and also of definite articles, which can generally be resolved into segregatives or demonstrative pronouns (*he*, *she*, *it*, *that*, &c.), and these, in their turn, into substantives or crudes signifying *thing animate* and *thing inanimate*; the former, again, often distinguishing human from irrational and masculine from feminine. The other regular definitive postfixes are *nga*, *nye*, *ge*, *ni*, which appear to be variations of one particle and are probably radically identical with *ga*.‡ But

* The Burman and Manshu, in their possession of an objective particle, are nearer than Tibetan to the inflectional languages. But Tibetan sometimes uses its dative and locative postfix *la* as an objective. A particle similar to the Burman is found in the Oceanic languages, and is used in them, as in Burman, either for the dative or objective.

† The following is a list of the regular postfixed definitives, — *pa*, *va* or *ba*, *ma*, *po*, *vo* or *bo*, *mo*; their combinations *papa*, *pama*, *papo*, *pamo*, *tava*, *vapo* *vama*, *vamo*; *ka*, *kha*, *ga*, *nga*, *ge*, *nge*, *ni*. The distinctive radical powers of these particles have been in great measure lost. Several substantives take either *ma*, or *pa* indifferently. The vowel *o* has an intensive or emphatic power, having, in this respect, an analogy to *s*. As *s* forms the agentive and causative and is used in the completive (or past tense), so *o* renders words assertive and is also used in forming the imperative. In strict analogy with these applications, is its office in the definitive, for *po*, *mo* &c. are obviously the radical *pa*, *ma* &c. with the substitution of *o* for *a*. Csoma de Koros says "the terminations *po*, *vo*, (*bo*) are a sort of definite articles or emphatic particles, denoting a person or thing especially or in an eminent degree". "With some nouns *po* and *vo* as articles denote the male and *mo* the female." With animals *pho* may be used for males and *mo* for females. "The terminations *ma* or *mo* denote a female or anything of an ambiguous gender", meaning neuter. But the masculine postfix is also applied to neuters. *Pa*, *po* and *ma*, *mo* are used as masculine and feminine personative terminals like our *-er* and *-ess*. Ex. Bot-*pa* a Bot-man or Tibetan man, Bot-*mo* a Tibetan woman; Sok-*pa*, Sok-*mo*, a Mongol man or woman; Hor-*po*, Hor-*mo*, a Turk man or woman. It is applied in the same way to names of professions &c.

The definitive is sometimes used after the qualitative as well as the substantive, as in "king-the great-the" for "the great king." When two substantives are connected possessively, the definitive follows the last, "tree-of root-the"

‡ *Ni*, although little removed from *nge*, should probably be excepted from this remark. It is Scythic &c.

besides these particles, the prefixal sonants *g*, *d*, *b* or *v*, *m*, and *h* appear to be, in reality, definitives. They are used with words of action as well as with substantives &c., and, in the former case, have an assertive, and generally also a specific tense, force.* But the tense applications vary in different verbs, and the generic power is evidently purely definitive and assertive. The prefixal *r*, *l* and *s*, *z* appear also to be ancient definitives now only preserved in writing. Like the segregatives of the Chinese and Ultraindian languages, they subserve the secondary object of distinguishing homophons from each other. The grammarians still direct them to be pronounced, although in practice they are seldom heard. The prefixal letters *g*, *d*, *b* or *v*, *m* and *h*, with *l*, *r*, and *s* or *z* form the final consonants, with the addition of the nasals *n* and *ng*, and the compounds above enumerated. Although in the modern polished speech they are silent or obscure, the grammarians say that they should not be omitted, as they render words "sonorous and significant." It is probable that some of them are really the same definitives that are prefixal, for the position of definitives appears to have been arbitrary at an early stage of language.

Burman is deficient in purely definitive particles. It has an absolute 3rd pronoun, and relational or demonstrative ones, the latter being preplaced as in Tibetan, but it has no definitive particles, preplaced or postplaced, corresponding in use to the Tibetan prefixal consonants and postfixal definitives with substantives.† The masculine and feminine particles in which two of the latter have originated are found in Burman (*pha*, *ma*), but they are strictly confined to their radical or sexual use. In Burman no particle of this kind has received a generic or neuter application like the Tibetan *ka*, *ga*, the corresponding Anam *gai* and the Mon-Kambojan prefix *ka*. In this respect Burman stands on the level of the Siamese and Chinese, the latter, however, rising a little towards the Anam and Tibetan in the extended application of its *ko*. It should be remarked, at the same time, that Burman has an agentive postfix, *ga*, which is radically allied to the Tibetan particle. But it is found in several other languages, some of them remote, (e. g. Japanese, West African &c.).

The Burman directive system is more elaborate than the Tibetan. Its assertive and time particles are intimately connected with the definitives and directives, as in Tibetan. It has several agentive (simple, emphatic, &c.) and objective postfixes. One of the latter is, in general, purely or generically objective, another ad-transitive (motion), and a third dative, but the first is sometimes used with verbs of actual motion, and all are somewhat generic in their applications. Tibetan has no agentive save the

* This is a remarkable affinity with the Georgian prefixed and postfix letters of the verb conjugations (Brosset's *Elements*). The important and multiplied relations of the Caucaso-Georgian formation are pointed out in a subsequent part of this paper (See Chap. v. Sec. 4.)

† It retains prefixal *m* in a few words.

assertive prefixal consonants, and no distinctive objective affix. The Burman demonstrative *thi*, "this", is used as an agentive and assertive, and by itself denotes present time, but it may be joined with other time words as a mere assertive.* The proper past assertive is *byi*, and the future *mi*. Some of the directives are used participially with a time force, such as *hna*, "in," present; *hnaś*, *gās* "from," past; *thō* "towards," future. Even the possessive, *i*, occurs assertively with a time force.†

Both languages have plural words or particles, which are used with pronouns as well as with substantives, there being no distinct pronominal plurals. In Tibetan the plural words are merely crudes signifying "all." Burman possesses a proper plural particle, *do*, *to*, [Mongol -*od*, -*d*, -*ē*] but *mya*, "many," is also used. Of the Tibetan particles, *nam* and *dag*, the second, only, under the form *chag*, is applied to pronouns. Burman has also verbal plural particles, a trait in advance of Tibetan. ‡ Time and mood are minutely discriminated by compounding particles.

In the expression of the modes and relations of the action, the Tibetan presents a mixture of crude and flexional traits, the former predominating. Separate post-placed auxiliary words are exclusively availed of, with a few exceptions, amongst which are the assumption and discarding of the prefixed consonants; the use of a postfixed -*s* to indicate the past; the change of the vowels *a* or *e* to *o* and the assumption by *k* of an aspirate, which sometimes take place in the imperative; and the change of *e* to *a* in the future. There are some other instances in which a flexional process is used for ideologic purposes. Such is the capacity of rendering a word assertive by repeating the last letter with the vowel *o* (e. g. *nag*, "black," *nag-go*, "it is black.")§ There are probably no

* *Thoo thi pyōō thi*, he does (it). Here *thi* occurs as an agentive after the pronoun and an assertive after the verb.

† It is used in place of the demonstrative (or present assertive) at the end of a sentence, and also when speaking of a past transaction in the present tense.

‡ *Nga do thwa kya thi*, "we go." Here *do* is the plural particle of *nga*, "I," and *kya* the plural particle of the verb *thwa*, "go," followed by the assertive of the present, *thi*.

§ The postfixal (and infixal) *o* is probably the remnant of a definitive or 3rd pronoun, and may be also preserved in *kho*, *khu* (he, she, it.) Garo has *u* but this appears to be connected with the labial definitive. In Tibetan the theme of the verb is the crude root with the definitive postfix *p*, *b*, which forms what may be termed a participle. It may be used either as a substantive or a qualitative. The infinitive postfixes *r* to the definitive. The following is an example of the flexions and *quasi* flexions of some of the Tibetan verbs,—*akhal*, indicative present; *khol* imperative (*a* changed to the intensive *o*); *ōkal*, future (pref. *h* changed to *b* and aspirate *kh* to *k*); preterite, *ōkal* -*s*. Under all variations the verb remains participial or substantival. In general the agent of active and causal verbs takes the instrumental directive, unless the verb is intransitive.

The words or particles used as assertives or verbs absolute, differ according to the social relation of the speaker to the hearer, whether equal, inferior or superior (*yin*, *yod*, *hdug*, *bzhugs*, *mchlis*, *lags*, *mnah*, *gdah*, *mad*, *mod*, *htshal*, *gnas*, *anang* and *bzhimpa*). By prefixing *mi*- they are made negative or privative. By these and the auxiliaries *byed* (do, make,) and *gyur* (become, grow, change, turn), all verbs may be formed and conjugated. The use of the prefixes as assertives, varying somewhat irregularly with the time, is a remarkable characteristic of Tibetan, and tends to con-

languages in which numerous traces may not be found of an early flexional tendency, not yet rising to the expression of universal or general relations, but rather limiting itself to that of special ones, such as resemblances amidst differences and differences amidst resemblances in particular substances. But the instances we have given are true (although probably not primitive) flexions, which it would now be difficult or impossible to trace to any separate root.

The Burman is not without similar flexional tendencies. Thus a neuter verb is rendered active by aspirating its initial consonant, and an attributival word is made substantive by prefixing *ā*.

In the great use of auxiliary particles, the Tibetan and Burman agree with most of the languages that stand between the inflexional and the purely crude. In both, several of these have lost their separate meaning, but I have no doubt that a glossarial analysis of the two languages, aided by the flood of light thrown on this subject for all formations, and particularly for the surrounding ones, by the Chinese and Chino-Ultrindian languages, will restore a large number of them to their ancient character of distinct words.

The remarks which I have already made on the peculiarities of the Burman, when compared with the other Ultrindian languages and the Chinese, render it unnecessary to compare the Tibetan specifically with the two latter. Phonetically the Chinese, Burman and Tibetan have some common affinities which distinguish them from the E. and S. Ultrindian, such as the strong dento-sibilant tendency. The vocalic tendency is greater in this alliance, which we may term the Chino-Tibetan, than in the older

firm the opinion that they are merely definitives or pronouns used assertively, for assertives appear to have been at first pronouns. The Africo-Semitic and Aso-mesian languages furnish abundance of evidence on this point. The prefix *ga* is, in some verbs, retained in all the tenses, with some in the present and future only (but sometimes in the imperative also), and in many in the future only. With different verbs *da* is used in all the tenses, in the future only, or in the future and past; *ba* is used in all in the past only for in the past and future; *ma* is used in all (but) in a few instances in the past and future only; *ha* is employed more extensively than the other prefixes and with most verbs in the indicative present only, in some in all tenses, while in many it is dropped in the past. It has thus much claim to be considered as the distinctive assertive of the present, and as radically meaning *this* or *the-here*. This is cleared from all doubt by the words *de*, "that", *hede*, "this", *hadina*, "here", in which *ha* is obviously the proximate definitive. *Ba* and *ma* are the common definitives. *Ga* is used as an attributive definitive in Changlo, (*ga* possessive, dative, *ga-i* ablative). *Da* probably corresponds with *na*, *la* &c. locative. The resolution of tense particles into directives, originating in some of Humboldt's suggestive analyses of forms, has been applied, with complete success, to the Euskarian verb by the Abbe Dorrigol, and extended, with great learning and critical skill, to many other languages by the Rev. Mr Garnett. He touches on Burman and Tibetan, but the prefixes of the latter appear to have escaped his attention and he has overlooked the fact that the Burman *thi* is properly demonstrative and not simply instrumental. (See his admirable papers in the proceedings of the Philological Society iii, 27, 213 &c.)

Ultraiidian languages, but that it is the result of emasculation and not an archaic trait, appears from the facts we have adverted to. The fundamental character of the S. E. Asian phonology is a highly developed articulative power, restrained within monotonic limits, but by this very restraint compelled to give the utmost variety to elementary sounds. The complex final vowels are still, to a large extent, abortive or stifled consonants, and each group contains evidence that the emasculative tendency to which the obscuration or loss of final consonants is attributable, is not primitive, nor even very archaic. The Irawadi phonology is more vocalic in some languages than the most vocalic Chinese, but the character of the Rakhoing or Arracan dialect compared with the Burman, and of the written and provincial Tibetan compared with that of the softer form, shews that the aversion to final consonants is of comparatively modern growth. The contrast between the Tibetan and the Burman, two adjacent members of the same special formation, is most instructive. The former is phonetically the most vigorous and consonantal of all the S. E. Asian languages, while the latter is the most emasculated, and yet the evidences of an archaic identity or close affinity in phonology are abundant.

A comparison of the two forms of Tibetan with each other and with Burman, proves that emasculation begins with a decay in the power of maintaining the distinction between the surd and sonant finals. A strong phonology has three series of principal non-aspirate and weak aspirate consonants,—the non-vocal and non-nasal or surd, *k, t, p*; the sub-vocal, sub-nasal or sonant *g, d, b*; and the quasi-vocal and nasal *ṅ, n, m*,—the last, however, not being a pure nasal, but lying midway between the sonants and nasals. When the articulative energy decays, the middle series passes into the first, and, sometimes, partly into the third. *G* becomes confused with *k* or *ṅ*; *d* with *t* or *n*; and *b* with *p* or *m*. In the next stage, the sub-vocal *l, r*, pass into the nasal *n*. The labial surd passes into *m*. *M* itself is next lost. The two remaining surds, *k, t*, then disappear. Lastly, the pure nasals are lost, the least vocal *n*, first, and the most vocal, *ṅ*, last. Applying this to the S. E. Asian languages, we find that the archaic phonology, represented by the written and provincial Tibetan, possessed final sonants, and that the emasculative tendency has caused the sonants to pass generally into surds. In all the other S. E. Asian languages, as in the emasculated Tibetan, final sonants are rare or altogether obsolete. *B* alone keeps its ground in the stronger Chinese phonologies, in Kambojan and Siamese, while in Anam and the Irawadi languages it is wanting. The liquids *l, r* are maintained in Chinese and Kambojan, *l* passing into *r* and *n* in Siamese. In the Irawadi languages they are lost. The sibilant is preserved in Kambojan and Siamese but is lost in all the others. *M* is lost in Burman and Karen. Finally, *k* and *t*, which keep their place even in Burman and Mon, disappear in Karen. In the Irawadi

family the nasals themselves begin to decay, the most vocal, *ṇṇ*, alone remaining in Karen.*

The contrast between Tibetan and the Irawadi phonologies, leads us to infer that the latter have received their vocalic tendency from contact with some other formation, probably the Chinese, and that Tibetan has retained its superior consonantalism through its comparative isolation. With respect to Burman in particular, it cannot be doubted that it was, at one period, more close in geographical position and in phonology to Tibetan, than to the other S. E. Asian languages. Separation from Tibetan and contact with the present S. and E. Ultraindian languages cannot have been amongst its normal conditions.

Ideologically, Tibetan agrees much more closely with the Burman than with any of the other S. E. Asian languages to which we have adverted, and where it is in advance of the Burman it is in advance of the others also. The S. and E. Ultraindian languages have a close alliance amongst themselves, and are also more closely related to the Chinese than the Burman and Tibetan. The Burman and Tibetan, relatively to the Chinese, on the one side, and the S. and E. Ultraindian alliance, on the other, may be considered as belonging to a distinct formation, having, however, much stronger affinities to the former than to the latter. But the differences between Burman and Tibetan, not only glossarial but phonetic and ideologic, are so great as to preclude us from deriving the one from the other. We must, for the present, consider them as distinct remnants of a formation having, to a very considerable extent, the same basis as the Chinese. The Burman is much closer to the Chinese, but it is not so completely intermediate, as to justify the conclusion that it was the basis of Tibetan. The *proto*-Tibetan belonged to the Burman formation. It was a sister, not a daughter, of the Burman. It cannot be said that the Tibetan, in its present form, is, in all respects, in advance of Burman. On the contrary, it might be said, with considerable truth, that in Tibetan, the original formation has degenerated more than in Burman. The latter appears to have preserved much more of the Chinese ideologic richness than the Tibetan, but the latter may prove, on better acquaintance, to be wealthier in this respect than we should conclude it to be from the grammar of Csoma de Körös. The Burman exhibits the Chinese ideology passing into an inchoate Scythic and Indo-Germanic form. The chief cause of the different aspects which Burman and Tibetan now present is, that the tones which have decayed in the former are completely lost in the latter. If this loss had been followed by the development of the accent, the gain would have been a decided one, because it would have transferred Tibetan into the harmonic family. Tibetan, without tones and without rhythm,

* Some further enquiry is needed for the Angami Naga phonology. The loss of the nasals with the persistence of the liquid *r* is anomalous.

occupies a **very** peculiar phonetic position. The general character of its phonology and structure will be best appreciated by viewing it as a decayed tonic or monosyllabic language. The loss of the tones has at once allowed and induced the formation of dissyllables. The number of homophons must have been greatly increased not only by the loss of the tones, but by the relaxed articulative power which probably accompanied it, and led to the obscuration of many compound consonantal and vocalic sounds. Hence a necessity would arise for using double-words and definitive particles more extensively, and the want of tonic repulsion would cause these compounds to assume the form of dissyllables. Although the accent was wanting, the constant juxta-position of the two monosyllables and the unity in the idea which they represented, would gradually lead to a closer phonetic union by ellipsis and euphonic accommodation of sounds. The crudeness of the phonology has not allowed this to be carried to a great extent. That it has not proceeded further and led to the development of the accent, is probably owing to the proximity of Tibetan to the Chinese and Burman family. When we consider the affinities of Tibetan with Burman and Chinese, we cannot doubt that it once possessed numerous segregative particles, and as the loss of the tones must have given additional value to these, it is more reasonable to conclude that they have been incorporated in the dissyllabic words than that they fell into disuse.

When we compare the Tibetan with the more advanced postpositional languages, we miss the sonorous, fluent and harmonic character which distinguishes most of them, although several preserve harsh consonantal sounds. We observe also that it retains far more monosyllables, indulges in few polysyllabic words, has fewer combinations to indicate the finer distinctions of time, mode and other relations of action, and leaves more to be supplied by the drift of the speech. In a word, its ideology is comparatively crude or concrete, and if the Dravirian and the Osmanli Turkish stand on the confines of the abstract dictional languages, the Tibetan, like the Mandshu, the Mongol and the cruder Turkish, have not advanced far beyond the ideology of the Chinese. This is well illustrated by what I consider the best single test of the phonetic and ideologic development of a language, the mode of referring an action to person, time and place. In the Tibetan, as in Burman, Mandshu and the crude languages, there is no union of the pronoun with the action word, whereas in the Mongol, the Turkish and the purer Dravirian languages, as in the Iranian, the action word takes a pronominal postfix, which is an echo of the person or agent.

In comparing Burman and Tibetan with other development's, such as the Semitic, the use of definitives as assertives, the possession of distinct verbs absolute, or of words that have acquired their functions, the great variety of auxiliary relational particles,

and the power of heaping them together and of ideologically treating long combinations of words as single terms, require to be prominently noticed.

Sec. 2nd. NORTH ULTRAINDIAN.

In Arrakan and in the basin of the Irawadi there are several tribes of the same stock with the Burman, and their languages are, in their present form, so much akin to it, that they may be almost considered as forming with Burman dialects of one tongue. Leaving out of view the intruding and partially interspersed Shan or Lau tribes, the Burmans march on the north with rude tribes of their own family, collectively termed Singpho,* who occupy the upper Irawadi. On the extreme north the linguistic boundaries of the Singpho are unknown. It is possible that they march with the Kham-pa or ruder Tibetans of the S. E., unless the snowy mountains, which there form the watershed between the Irawadi and the Tsang-po, cut them off, as is more probable, from all intercourse with their northern neighbours. A wild tribe only known under the generic Lau term Kha-nung, occupy the mountains to the N. and E. of the Kham-ti, apparently in the upper part of the basin of the Mi-li or Nam-kiu. They are interposed between the Kham-ti and the Mung-fan, the latter appearing to belong to the Tibetan family (Si-fan or Kham-pa). The Kha-nung may form a link between the Kham-pa and the Sing-pho or Burman families. On the N. W. the Singpho march with the Mishmi, who occupy the eastern mountainous extremity of the basin of the Brahmaputra, and on the W. and S. W. with the Naga and Manipuri tribes. In the interior of Arrakan, and between it and the Kynduayn river, several tribes are scattered over the highlands to the south of the Kuki, Naga and Manipuri tribes. Some of these, such as the Khyoung-tha and Khumi or Kumwi† of the middle basin of the Koladan, belong to the Burman family. But the more eastern tribes, such as the Lungkhat of the upper Koladan, and the Heuma or Shindu and Khon or Kun, who are beyond the Koladan,‡ are too little known to be referred with certainty to any particular branch of that family, although

* Properly sing-Pho. It is the generic term for "man," *sing* being a definitive prefix, and *pho* the root (*put*, Mon; *piao*, Ugrian; *bat*, Turkish; *me-pa*, Kuki, Bongju; *mu*, N. Tangkhul; *pu-chai*, Siam &c. &c. In Tibetan and several of the cognate languages *po*, *pa* is restricted to the male sex, and *mo*, *ma* to the female.)

† Properly ku-Mi,—*mi* being the generic term for "man," as in Tibetan &c., and *ku* a definitive prefix common to the Kumi, Karen and some other Tibeto-Ultraindian languages with the Mon, Kasia &c.

‡ Are these not a branch of the Kuki or *Lunkha*?

§ The Kun, however, are partly at least within the Koladyn basin, for Captain Tickell says, the feeders of the Mikhyoung, the principal eastern affluent of the Koladyn, descend from masses of high hills, about 21° 50' N. Lat. inhabited by the Kun. He places the Heu-ma in the higher hills to the N. and N. E. of the Kun between 21° and 22° N. Lat. and 93° and 94° E. Long. (J. A. S. 1852 p. 207.)

it is probable the latter are allied to the Kuki, Kumi &c. The Lungkha are said to be composed of an offshoot of the Heu-ma or Shindu (Shentu, Tseindu or Shiamdu) and two tribes called Lungkhe and Bowng-jwe which it subdued. If the etymologies may be taken as a guide, the subjugated tribe was the southern extremity of the *Lung-kha* and *Bong-zu* race. The Heuma do not appear to differ perceptibly from the other rude tribes of the Burman family. They are probably closely allied to the Manipuri tribes.* To the south of the Koladan in the Yuma range, as far as the N. borders of Pegu, but chiefly in the upper basin of the Lemyo, are the Khyeng or Khyen. The name appears to be identical with the generic Karen, in the soft or Burman pronunciation, and their tradition that they once possessed the plains of Pegu and Ava supports the opinion that they belong to the same race. They may be a remnant of an older horde from the N., which was pressed into the mountains, or restricted to them by the Karens, as the other Yuma tribes probably were. Linguistically, they are closely connected with the Yuma tribes to the northward. Physically, they are of the earlier and purer or more Mongolian caste of the Irawadi family like the Nicobarians, Kumi and Kuki. Their faces are flatter and less regular than the Burman, and consequently than the Karens. Captain Phayre says their manners and appearance are similar to those of the Kumi. As they make iron and cloth, and have the usual weapons of the ruder Irawadi tribes, their present backwardness is evidently an effect of their sequestered position. To the north of the Kuladan are found the Bom or Bun-zu [Bom-du] of the Rakhoings, who chiefly, if not exclusively, inhabit the upper basin of the Kurmuli or eastern branch of the Chittagong river. To the north of the Bun-zu are the closely allied tribes termed collectively Lungkta, Kungye or Kuki, who occupy the highlands of Tiperah and extend S. E. towards the head of the Kuladan. Both the Bun-zu and Kuki appear, like the Kumi, to belong to the Burman family. The Kuki represent its most archaic and barbarous condition. The tribes that have been exposed on the seaboard of Arakan, or in the basin of the Irawadi, to the influence of the Chinese, Shans, Mons, Bengalis and more distant commercial nations, have attained a comparatively high civilization. The Singphu, although much behind the Burmans, are greatly in advance of the Kuki. From this distribution of the Burman family, and from the affinities of language, it may be inferred that at a very ancient period, when their condition was similar to that of the Kuki, and, perhaps, in many respects more barbarous, they spread themselves from the upper Irawadi to the south and west, as far as the highlands of Tiperah on the one side and Pegu on the other. Wherever the

* Are the Hio of the S. W. Manipuri hills not the Hiu-ma? If so Captain Tickell's Hekka is probably Manipuri.

stock from which they have been derived was originally located, they probably first appeared on the Ultraiadian ethnic stage as a barbarous Himalayan tribe, immediately to the eastward of the Mishmi, if indeed they were not identical with the Mishmi of that era. The upper Irawadi was probably then occupied by the ruder and inland tribes of the Mon-Anam alliance.

The Karen dialects of the lower Irawadi and Tennaserim and the language of the Toung-thu, who dwell between the Setang and the Salwin and in Amherst province, are more closely connected with the Yuma languages than with the Burman. Karen has been more assimilated to the Burman phonology, but it has remarkable affinities with the Mon-Anam or Mon-Lau alliance. Glossarially it is mainly Tibeto-Ultraiadian of the earlier form, or that which characterises the Yuma and Naga-Manipuri languages. Toung-thu has a large glossarial agreement with Karen, but it has special affinities with the Kumi and other Yuma dialects and particularly with the Khyengs. The last fact is a strong corroboration of the opinion that tribes of the Naga-Yuma alliance preceded the Burmans in the basin of the Irawadi and in Arakan. It also suggests the further conclusion that the Khyengs, who are widely spread over the Yuma range, from the land of the Kumi nearly to the northern border of that of the Mons, occupied the adjacent lowlands to the eastward, prior not only to the Burmans but to the Karens, an inference which accords with their own tradition.

No information has yet been obtained respecting the languages of the Karen-ni or Red Karens, the Ka Kni, the Ka Kua, the Ka-du, the Phwon, the Pa-long, the Ka Kyen, the Lawa and the Khu-nung of the Irawadi and the Salween basins.

*Yuma Dialects.**

The Khyoung-tha of Arakan are a rude Rakhoing tribe, speaking the Rakhoing dialect of Burman. The Kumi, Khumi, or Khumwi are of the same race, but their language has some peculiarities. It has been partially examined by Captain Latter, who says it is evidently cognate to the Rakhoing form of the Burman. To appreciate the justness of this remark, it should be borne in mind that the affinities of the dialects of rude lan-

* Principal authorities. Phayre, "Account of Arakan," J. A. S. x part II (1841) p. 712. Comparative vocabulary of the Burman, Lung-khe, *Koladan* Kumi, Mi Kumi, Kyo, *Lemyo* Kyng, Doing-nak and Mrung, with "A note on some Hill Tribes on the Kuladyne." T. Latter. J. A. S. xv. (1846) p. 60. Grammatical notices of the Kumi, Kyau and a comparative vocabulary of the Burman, Arakan, Kumi, Kyau and Bengali. S. R. Tickell, "notes on the Heuma or Sheudoos" with a short vocabulary, *Ib.* (1852) p. 207. V. Barbe, on the Bunzoo and Kumi with a short comparative vocabulary *Ib.* xiv part I. (1845) p. 380. John Macrae, "Account of the Kookies or Luncas" with a short vocabulary, A.R. vii. (1801) p. 183. Francis Buchanan (Hamilton), "A comparative vocabulary of some of the languages spoken in the Burma empire," A. R. v. (1799) p. 219, including a Khyen (Koloun) and Manipuri (Moitay) list.

guages are not to be judged by mere identity, or otherwise, in the words that correspond, in use, to the inflexions and serviles of more advanced formations. Burman has a great variety of particles and of substantive words used as particles, and, from this cause, it might itself vary to a very considerable extent, from era to era, in the choice of these for particular purposes. Kumi has a strong phonetic and ideologic, and a considerable amount of glossarial, agreement with Burman. But the majority of its words are non-Burman, and the glossarial variation extends to words used as relational terms. Thus the directives are post-placed and capable of being compounded like the Burman, but they are not identical with the latter, or at least the resemblance, where it exists, has become obscured. Most of the Kumi directives postfix *o* (sometimes euphonicaly *vo*) as some of the Burman do *tho*, both having a transitive force. *Man* "in," may be the Burman *mha*, and *baō*, "from," the Burman *mha*. The plural postfix *tchi* is different from the Burman, but it may be merely a substantive word signifying "many" like the Burman *mya* "all" and the Tibetan plural postpositions. The particles of gender are different—masc. *tehiau*, *poh*, man; *p'ing*, large animals; *loh*, small animals; *luhi*, birds. Fem. *tcha*, man; *nu*, generic. The use of different words for different classes of beings is a Burman trait. *Poh* is probably the Burman and Tibetan *pha*. The others are not used for a similar purpose in Burman. But they may notwithstanding be Burman words. The unfixed condition of the language when these terms came into use may be inferred from the Burman *pha*, father, being restricted as a sex post position to birds. Its use in Khumi is probably the older one, as it is similarly applied in Tibetan. The time postfixes are also different from the Burman. The present and future are indicated as in Burman, by the same word. Khumi seems to have no segregatives save for human beings (*laung*, the Dhinial *long* probably; and in various forms, a widely prevalent root for "man" e. g. *lu* Burman.)

The Kyau or Kyo and the Khyeng appear to be similar, in their general character, to the Khumi. They have numerous common words, and each has words common to it with Khumi, with Khumi and Burman, and with Burman only, besides having a proportion of peculiar words. The structure of the glossaries, particularly of the Khyeng, is Burman more than Mon, that is, they have fewer prefixes, and are thus mainly monosyllabic. The peculiarities in the Khumi particles, and the frequent glossarial agreement between Khumi, Kyau and Khyeng, render it probable that all have, as a common basis, the ancient language of Yuma and Arakan, and that this differed from the Burman to a considerable extent, having, one of its peculiarities, a larger mixture of the prior formation of Ultraiidia. All the ancient or pre-Burman dialects of Arakan, from the Khyeng to the Kuki,

retain one of the characteristics of the Mon-Kambojan alliance and of Tibetan, the use of definitive prefixes *ka*, *a*, *ma* &c. Khyeng and Kyo have few, but, if Captain Phayre's orthography does not mislead me, they sometimes, like the Karen, use initial *h* as a definitive. This however is probably an ancient Tibetan trait. E. g. Ear, Kh. *āno*, Kyo, Burm. *na*, Kumi *ka-na*; Iron, Kuki *kti*, Lung-khe, *tir*; Mountain, Kyo, *hlung*, Lung-khe *klang*, slang, Huma *klo*, Manipuri *malong*, *kalong*, &c.

A comparison of the Khyeng, Khumi and Kyau vocabularies with the Bonzu and Kuki shews that, in their non-Burman ingredients, all are dialects of one language. The Khumi and Kyau phonologies are assimilated to the Rakhoing, the only peculiarities being the occasional occurrence of final *l* in Khumi; *l*, *r*, in Kyau; *p* in both; and *v* in Khumi. The Bonzu and Kuki are more consonantal in their finals. 100 Bonzu words give the following, —Vowels, 54; Cons. 46, —*n* 11, *ng* 2, *m* 6, *h* 5, *t* 3, *r* 18, *l* 2. The liquids *r*, *l* form about one-half of the consonants. *R* frequently represents the Burman *n*, or *vice versa*. In some cases it is either merely euphonic or a definitive. The definitive postfix of the numerals, which is *-k* in some of the Kuki digits, and *h*, *-ch*, or *-t*, in some of the Kyau, Kumi, Rakhoing and Burman, is *kar*, throughout, in the Bonzu. The initial *m* of Burman is vocalised in some Bonzu words, e. g. *marui*, snake; Kyau, *mrui*; Rakh. *mrui*; Burm. *mywe*. In Khumi it is sometimes converted into *p* as in *puwi* snake, *paleng* ant, *p'laung* boat (*m'laung* Kyau). The Kyau sometimes agrees with the Bongza and Kuki more closely than with the Khumi, a circumstance that renders the peculiarities in the personal appearance of the tribe more remarkable. Captain Lutter informs us that while the adjacent highlanders have a Tartar-like physiognomy, the Kyau, in features, dress and appearance, can scarcely be distinguished from the lower class of the Bengali peasantry of Chittagong. They are dark and have large features, while the Kumi are fair, with small features. The Bonzu are said to resemble the Burmans, but to be less strongly built and not so well made (Barbe). The Kuki are described as short, muscular and active, with massive limbs, and darker in complexion than the Chumiahs, who are located in the lower hills between them and the plains, to the north and east of Chittagong. Both tribes have flat noses, small eyes and broad round faces (Macrea). They differ essentially in appearance, as in [some of their] customs from the Nagas (Fisher).

The Lung-khe and Shindu dialects belong to the same group. The Lung-khe has special affinities with the Kyau and Khyeng as well as with Kumi. The Shindu has similar affinities with the Lung-khe, Kyau, Kumi, and Khyeng, with the Bong-ju and Kuki, and with the Naga-Manipuri vocabularies. The latter are so considerable that it may be regarded as a member of the Naga-Manipuri group also. The glossaries of this group as a whole

are intimately connected with the Yuma, as will appear in a subsequent chapter.

No vocabulary of the Kun has yet been published.

The Mrung, who dwell in the upper basin of the Mayu and also, it is said, amongst the hills on the eastern border of the Chit-tagong district, say they are descendents of captives carried away from Tiperah by the Kings of Arakan (Phayre J. A. S. x. 684.) The vocabulary differs in most of its roots or forms from the adjacent Yuma languages, and these peculiar terms I find belong, not to the Bong-zu or Kuki of Tiperah, but to the Garo and Bodo. This is a striking confirmation of Aarakanese history, which relates the conquest of a portion of eastern Bengal by the Rakhoings. Captain Phayre makes Dacca the northern limit of their possessions, but a deportation of Garos and Bodos, or of a mixed tribe on the confines of the pure Garos, shews that their conquests extended much further in that direction.

*Singpho.**

The Singpho language, like the race, appears to belong mainly to the Burman branch of the Irawadi family, but its special affinities with the Naga-Yuma branch are so strong that it is perhaps most correctly described as intermediate between the two. From their great extension over the upper basin of the Irawadi and their comparative barbarity, it may be inferred that the Singpho are, in fact, descended from the stock from which the Burmans were immediately derived. It is probable that the southern tribes spread into Arakan and were there modified by the influence of the Gangetic race before they re-entered the lower basin of the Irawadi and successfully contested its dominion with the Mons. The era of even the last of these movements must be remote, for the Arakan form of the Burman is much more antique than that of the Irawadi. The influence of the Chinese, Mon, and Karen appears to have affected the latter. Singpho, again, has lost some of the Burman characters from the long continued influence of the Naga dialects. But our knowledge of the Singpho dialects is much too limited to enable us to understand their full bearing on the history of the Burman family. As the Singpho tribes are spread over nearly three degrees of latitude and as many of longitude and are much disjoined by the intrusive Lau or Khamti, who began to occupy the larger plains and vallies about six centuries ago, it is probable that the original dialectic variation in different districts has been increasing instead of diminishing. In some places where the native tribes now experience a difficulty in understanding the dialects of each other, the language of the dominant Khamti has become a *lingua*

* W. Robinson aided by M. Bronson, J.A.S. xviii part, I. (1849) p. 318 —Gram-matical notices; p. 342, Vocabulary. N. Brown, "Comparison of Indo-Chinese languages" Ib. 1837 p. p. 1027, 1033. N. Bronson, Vocabulary in B. H. Hodgson's series, Ib. xviii, part II (1849) p. 909.

franca, so that the great cause of linguistic change, the simultaneous currency of two languages, is in operation in the upper Irawadi as in so many other portions of S. E. Asia and Asianesia. The vocabulary of the Kha-nung is said to have some words in common with the Singpho, but the kind of relationship thereby indicated remains quite unknown. It may arise from both belonging to the same family or it may merely be the effect of intercourse.

100 words in Burman and Singpho afford the following final consonants:

	$\tilde{n}g$	n	m	k	t	$p=38$
Singpho	19	11	5			2
Burman	9	16	—	8	7	—=40

From this it would appear that Singpho affects the liquid $\tilde{n}g$ and Burman n ; that Singpho has m like Mishmi and Abor-Miri while Burman wants it; and that while Burman retains the surds k and t , Singpho has nearly lost them and been reduced to nasals. In both, the consonants form about 40 per cent, of which the nasals make 25 in Burman and 35 in Singpho. The latter has liquid combinations, ml , nl , nr , nt , nd , $\tilde{n}gg$, pr , pht , kr , khr , gr , mb , mp , mph , ts , nts . The prefixed aspirates of Burman, Karen and Mon are not found in Singpho, nor the aspirated liquids lh , rh , $\tilde{n}gh$, nh , mh , nor the sonant sibilant z and its combinations, nor those sounds common to Burman and Chinese in which w forms an element as mw , mrw , rw , hkw , sw , thw , &c. The Singpho mr in some cases corresponds to the Burman mr , but the initial m is often a contraction of the prefix ma common to Singpho with Naga, as in *mbung*, (Nag., *mapung*, pong); *masum*, 3; *meli*, 4; *manga* 5, *matsat*, 8; *mlisi*, 40; *mangasi*, 50. The numerals are found bare in Burman. $N-$ is also sometimes a contraction of the prefix na . The absence of initial k before other consonants in Singpho and the adjacent Naga dialects, its greater frequency in Mon and Karen than in Burman, its occurrence in Simang, its absence in the other Ultraindian languages and in Chinese, render it probable that it was a general characteristic of the earlier Tibeto-Burman phonology of the Irawadi. In comparing the vocabularies it must be observed that in Singpho the verbs have the assertive or imperative postfix u , sometimes with euphonic consonants between it and the root as in Namsang Naga (*o, po* &c.), Abor-miri (*u, pu* &c.), Murmi, Gurung, Magar, Sunwar and Tibetan, and that some of its qualitives have the definitive pref. *ka, ke*, common to Mon, Naga, Kasia, Limbu &c. Ideologically Singpho appears to agree closely with Burman, but it has some peculiar Naga and Tibetan characters. Its vocables sometimes possess the prefixed definitives of the pre-Burman formation, and in the Jili dialect they are used as regularly as in the Manipuri group. The objective is said to be distinguished by the position of the substantive only (as in Tibetan), but, if the

sentences given by Mr Robinson can be trusted, the dative postfix *fe* may also be used objectively. *Ngai-fe, nang-fe, singphoo-yong-fe* *khi sijo-ha-dai* "Me, you, the-men-all he made"* The past particle *ha* is probably the Tibetan *s*; the future takes *a* without the aspirate.

About one-fourth of the vocabulary appears to be common to Singpho and Burman. Both have numerous glossarial affinities with the other Tibeto-Burman languages of the Ganges, the Brahmaputra, the Irawadi and Arakan. Where the Singpho differs from Burman, it very frequently agrees with one or more of the Naga vocabularies and occasionally with Abor.

Manipuri Dialects.†

Before proceeding to the Mishmi and following the Himalayan languages eastward, it is necessary to examine those to the south of the valley of Asam to which I have not yet adverted. The most southern group is that of the native tribes of Manipuri, who are bounded on the east by the Shans of the Kynduayn and on the north, south, and west by Nagas and Heuma. Indeed it may be doubted whether there is any marked transition from the Manipuri tribes and dialects to those of the southern Naga, on the one side, and those of the Yuma range and the Blue mountains, on the other.

The Manipuri dialects are somewhat more consonantal in their finals than Mishmi, Singpho and Burman. They have the nasals *ng, n* and *m*. Like Burman they have *k, t*. Six of them, Manipuri, Champhung, Luhuppa, S. Tangkul, Khoibu and Maring have, in addition, the liquids *r* or *l*, or both. They replace *n* in some words.

A list of 60 words gives the following final consonants, omitting the nasals.

	<i>k,</i>	<i>t,</i>	<i>l,</i>	<i>r,</i>	Total.
Manipuri.....	5	5	9	0	19
Songpu.....	3	0	0	0	3
Kapwi.....	4	1	0	0	5
Koreng.....	2	1	0	0	3
Maram.....	4	1	0	0	5
Champhung....	5	0	3	2	10
Luhuppa.....	4	0	0	2	6

* In the other sentences *fe* is not used—e. g. *Phra alma nga-dai* "God one there is"; *sita, sigan, tu-dai sijo-ha-dai*, "the-moon, the-stars, shining made (he)". *Dai* is the verb absolute. As final *i* is often merely a phonetic increment in Singpho, it may be the Burman auxiliary *tha* (assertive). It does not correspond with the Burman *pyit* (to be or become) which is probably the Tibetan *byed* (to do, make &c.) unless the Burman *pyo* (to do) is the latter vocalised by elision of the final consonant.

† N. Brown, J. A. S. 1837, p. 1023, Vocabularies furnished by Captain Gordon. Buchanan Hamilton, A. R. v. (1799) p. 219, a Vocabulary of Manipuri under the name of Moitay.

N Tangkhul....	2	0	0	0	2
C Tangkhul.....	1	3	0	0	4
S Tangkhul.....	1	3	0	4	8
Khoibu.....	5	4	0	3	12
Maring.....	4	2	5	4	15

The Burman initials *nh*, *nt*, *nts*, *nr*, *mh*, *mp*, occur in some of the lists, as in Maram and Songpu. Initial *ng* is frequent in some, e. g. Champung. Most of them have *z*. *V* occurs in Lnhuppa and Champung. Several commutations are observable, as *n*, *l*, *r*, *s*, Ex. Iron,—Burm. *than*, Songpu *ntan*, Kap-wi *thin*, Lnhuppa *tin*, Maring *thiri*, S. Tangkul *thiar*; mouth,—Kap. *mamun*, Kor. *chamun*, Champh. *khamar*, Luh. *khamor*, S. Tangk., Khoibu, Maring *mur*; village,—Khoib., *yon*, Mar. *yul*; snake,—*pharu* Luh., *pharun* Khoib., *phrul* Maring, *kanu* Kor, *nru* Songp.; air,—*nungsit* Mar., *masi*, Luh., *mar-thi* Mar., *nong-lit* Khoib.;—*z*, *th*, *h*, *y*, day,—*ngasun* Luh., *masung* Tangk., *nunghang* Mar., *kalhan*, Songp., *nong-yang* Khoib.; dog,—*hwi*, Manip., *shi*, Songp., *tasi*, Kor., *athi*, Maram; *B*, *p*, *v*, *h*,—Flower,—*pan*, Maram, *abun* Champ., *won*, Luh., *mhun* Songp.; hog,—*wok*, Maram, Maring, *bok* Kap., *avak* Champ., *hok* Luh., Tangk., Koib.; *L*, *r*, *h gh*—bone,—*maru* Kop., *mahu* Mar.; buffalo,—*ahui* Kor., *aghoi* Mar.; *Z*, *ch*,—sky—*kazirang* N. T., *kachirang* S. T.

Definitive prefixes are found in most,—*tz*, *tha*, *cha*, *ka*, *kha*, *khan*; *ma*, *m*; *na*, *nga*, *ra*, *ram*, *ar*, *an*, *n*, *ng*; *a*.*

In Maring the prefixes are very rare, and, consequently, two-thirds of the words are monosyllables. Many double words may also be recognized. Thus *nung*, *nong*, *nu*, &c. enters into words for day, sky, sun, &c. It is a radical for day and occurs as such by itself in Tibetan &c. *nyi*, Koreng *nin*, Burman *ne*, Karen, Khumi *ni*, and with the def. postf.—*kar* in Bonzu,—*nikar*. Air, *nungsit*, Manip. *nong-lit* Koib. Day *nunghil* Man., *nongyang* Koib., *nunghang* Mar.; Sky, *nongthan* raipok Man. (raipak is Earth); Sun, *numit* Man., *naimhik* Songp., *rimik* Kapwi, *ani* S. Tangk., *nongmit*, Khoib., *nungmit* Mar. In these terms the postfix is the word for eye, the name of the sun being "day-eye" i. e. the eye of day, as in Malayu-Polynesian &c. In Songpu *woi* appears to be a generic name for large quadrupeds, *woirhoi*

* Manipari, *kak*; *nga*, *ma*, *han*, *a*, *ha*, *sa*; Songpu, *ha*, *ta*, *cha* (karau bone, *kalhan*, day, *kachai*, horn; *takoan*, horse; *chakhang*, musquito); *m*—(mpoon, air; *mihan*, flower); Kapwi, *ta*, *ka*, *ma* (topisa, cat, *tapong*, elephant, *tamlai*, day, *talsi*, earth, *taki*, horn, *masa*, bird, *matun*, mouth, *machil*, salt, *marun*, snake); Koreng, *ta*, *ka*, *cha*, *ma*, (tadui water, *tathem* hair, *tazyia* blood, *kumi* goat, *kabok* hog, *hunu* snake, *chapong* elephant, *chanu* fire, *chakha* fish, *chapi* foot, head, *chaben*, hand, *matom* cow, *malong* mountain, *matai* salt); Maram, *ta*, *tang*, *kha*, *a*, *cha*, *sa*; *ma*; Champ. *ta*, *khu*, *a*, *ha*; *nga*; *ma*; *sa*; Lnhuppa, *ta*, *kha*, *a*, *ha*, *nga*; *ma*; Tangk. *ka*, *a*, *na*, *nga*, *ma*,—(*ha*, *ta*, is rare); Khoib., *ka*, *tha*, *ma*, *na*, *ta*, *tam* (rare).

buffalo; *woitom* cow; *woipong* elephant.* *Sa, so, e* appears to be a similar prefix in Manipuri &c. but it is probably a definitive. Buffalo—*saloi* Kap., *alui* Kor, *aghoi* Mar., *siloi* Luh., *selui* S. Tangk.; cow,—*samuk* Man., Tangk., *shemuk* Champ., *simuk* Luh.; elephant,—*samu* Mar.; horse,—*sagol* Man., Champ., *sikwi* Luh., N. C. Tangk., *sapuk* S. Tangk., *shapuk* Koib., *puk* Mar. In several of the dialects *sa* occurs as a variation of *cha*, which is itself a form of *ta*, *ha*, *kha*. In Burman *kya* (*hra*) "tiger" is placed before the names of other large quadrupeds.

These dialects appear to possess slightly the power of phonetic union of roots by accent and accommodation. In the numerous words which have a definitive prefix it is subordinated to the root by throwing the accent on the latter, *chapi*, *chaki*, *chakwi*, *tasi*, *malí*, *malú*, *omit*. The prefix is sometimes further unitised with the root by phonetic accommodation. Thus before *l*, *ta* sometimes becomes *tam*, as in *tamlai*, elephant..

The prefixal definitives have not existed from their first origin or introduction as concrete parts of words, nor been solely borrowed as such by one dialect from another, although this has evidently been the case in a large number of the words. At one stage of the formation from which they have been derived they must have been current as separate particles, the application of which was arbitrary. They are most freely used in the Koreng, Champhung and Luhuppa and occur very rarely in the Maring. So in the Jili dialect of the north-Irawadi they are abundantly used, but in the Singpho very seldom. Coupling these facts with their absence, or rather rarity, in Burman, it may be concluded that the Burman portion of the Manipuri dialects existed at one time in a monosyllabic condition as in the purer members of the Burman family, and that the prefixes belonged to a formation which has had a great influence on the N. W. members of the family and partially affected the northern, but has either not extended its transformative power to those of the middle and lower Irawadi, or has been, in the Burman, Karen, &c., succeeded by an assimilative monosyllabic formation.† The tendency to unite

* In other languages of the same alliance it is also applied to the smaller quadrupeds, e. g. *kha-bot*, cat, *Kumi*; *ngwai-pai*, cat, *Toung-thu*; *ta-byu-pai*, goat, *Toung-thu*.

† The definitive prefixes and postfixes are fully considered in a subsequent chapter. They are found in Tibeto-Ultratindian, Scythic, N. and N. E. Asian, American, Caucasian, African and Asonesian languages, that is, in most of the formations of the world. The Chinese demonstratives are preplaced, and from the preponderance of prefixes over postfixes in the African and the allied Asonesian languages, and their preservation to some extent even in the languages of the great postpositional alliance, particularly in Tibetan and Yeneseian, it may be concluded that they were preplaced in the oldest formations of the world. It is probable that Tibetan was prefixal before it became postfixal, for still retains the entire range of prefixed definitives. The Mon-Anam formation remains purely prefixal, and we probably see in it the form by which the western languages akin to the Chinese, including those of Tibet and a much wider region, were characterised when they first began to feel the influence of the postpositional and harmonic

monosyllables by accent and phonetic change belongs to a still older formation, the Dravirian, which was either displaced or deeply modified by the Mon-Anam.

*Naga Dialects.**

The next series of languages to the north are those of the tribes that occupy the broad highlands of the Assam chain, extending from the N. E. near the head of the Kynduayn and Namrup, on one side, along the valley of the Brahmaputra to its southern bend round the W. extremity of the chain, and, on the other side, S. W. along the valley of the Kynduayn to the head of the Manipuri basin,† and then W. along the valley of the Burak and Surma. These highlands, thus embraced by the valleys of the Brahmaputra and its affluents on all sides but the S. E. where they slope to the Kynduayn, are chiefly possessed by five races, the Naga, Mikir, Kachari, Garo and Kasia. The Nagas are spread over the eastern and larger portion which abuts on the Kynduayn. They appear to extend in a S. W. direction not only to the upper basin of the Burak but across it nearly to the heads of the Kola-dan and Kurmfuli, thus marching with the Singpho and Khamti at one extremity and with the Manipuri tribes, the Shindu and Kuki at the other. On the N. W. they march with the border tribes of Asam and on the W. they are intermixed with the Mikir and Kachari. In Kachar they are found as far west as the Kupili river. From this great transverse extension of the Naga country, they stretch considerably both to the north and south of the tribes who occupy the western portion of the chain.

The first thing that strikes us on looking at the Naga vocabularies is their phonetic resemblance to those vocabularies of the Tibeto-Burman family which depart most from Burman. The S. Naga dialects are somewhat more vocalic than the Manipuri. The

formation.* Chinese itself has escaped this influence, and the great degeneration of its phonology has tended to widen the breach between it and the languages to the westward. The Mon-Anam languages retain the archaic and powerful phonology more tenaciously, and hence resemble the stronger Tibeto-Ultraindian more than the Chinese in many phonetic traits. The emasculated Chinese has deeply modified those members of both formations which have most felt its influence. Wherever it has operated fully, it has destroyed the archaic phonology and brought it back to a comparatively crude state. Amongst its other effects, it tends to restore the monosyllabic form, and to induce a disuse of prefixes and postfixes. Hence in Lau, and Anam proper definitive prefixes are wanting, and even in they Burman are rare, although the remnants which it preserves, shew that it was, at one period, as prefixal as the Naga-Manipuri and Tibetan.

* W. Robinson aided by N. Bronson J. A. S. xviii Pt. I (1849) p. 324, Grammatical notices of the Namsangiya dialect; p. 342, Vocabulary of the same dialect. N. Brown, Comparative Vocabulary of the Namsang and Bor Duor, Muthun and Khulung-Muthun, Joboka and Bonfera, Mulung and Sima, Tablung and Jaktang, Tengsa and Dopdor, Nogaung and Hatigor, Khari, Angami, and Mozome-Angami dialects (10 in all), Journal of the American Oriental Society, ii (1851) p. 157. N. Bronson and N. Brown, Vocabularies in B. H. Hodgson's Series, J. A. S. xviii Pt. II (1849) p. 969, and xix (1850) p. 311.

† Naga tribes are also spread along the western and partially on the Southern side of the Manipuri basin.

Burman consonantal junctions are less common. But they are not wholly absent. The aspirated, sibilant and vibratory *kh, ph, th, tch, ts, dz, ns, pr, kr, khr* occur, while in Kari *sn, nd* and *mr* are also found. The more compound and abrupt consonants of Burman and Tibetan are absent. The following table shews the proportion of final consonants in 100 words.

	Total										Total non-nasals	Grand Total.
	<i>ng</i>	<i>n</i>	<i>m</i>	nasals	<i>k</i>	<i>t</i>	<i>r</i>	<i>z</i>	<i>p</i>	nasals		
Namsang..	12	13	6	31	11	2	0	0	3	16		47
Muthun ..	8	14	4	26	10	0	0	0	1	11		97
Joboka ...	12	13	4	29	11	4	0	0	1	16		45
Mulung ...	14	10	5	29	14	0	0	0	2	16		45
Tablung...	17	9	4	30	14	0	0	0	2	16		46
Tengsa	18	8	4	30	6	2	0	0	3	11		41
Nogaung ..	21	3	3	27	7	0	8	1	6	22		49
Khari	13	7	3	23	7	4	0	0	1	12		35
Angami ...	0	0	0	0	0	0	3	0	0	3		3
Mozame-												
Angami..	0	0	0	0	0	0	4	0	0	4		4

From this table it appears that the range of final consonants is nearly the same as in the Manipuri group. The occurrence of *p* in most of the Naga dialects is the most important difference. The Angami vocabularies are exceptional and very remarkable, for they are almost purely vocalic and want the nasal finals. *T* occurs in one word in Mr Brown's vocabularies. The adjacent Manipuri dialects, with which they are intimately connected in vocables, have also a vocalic tendency, but they possess the nasals.

The structural resemblance of the Naga vocabularies to the Manipuri is not less close. The basis is monosyllabic, but they contain numerous dissyllabic words, which, in general, are composed of a monosyllabic root preceded by a definitive. The prefixes are the same that are found in Singphu, Jili, the Yuma, and the Manipuri dialects. They are common in all the vocabularies. *Ta*, *a* occurs most frequently, sometimes varied to *te*, *thi*, *i*. The guttural and aspirated forms *k*, *ch*, *s*, which it assumes in Manipuri, are rare. *Nia* occurs in several words. It is sometimes varied to *ba*, *be*, *pa*, *pha*, *va*, *van*, &c. In some of the languages *ta* is prefixed to the numerals or to several of them. *Be*, *ba*, *pa*, *pha*, *van*, &c. are also partially used with numerals. In Namsang, *van* -, *be* -, *bu* are used from 1 to 5, and *i* from 6 to 10: in Nogaung *ka*, *ta* and *a*, *pa* and *pu* are used; in Tengsa *kha*, *a*, *tha*, *the*, *pha*, *phu*; Mithan *a*; Khari *a*, *ta*, *te*; *pha*; Angami *ka*, *thu*, *the*; *pa*; *so*.

Mr Robinson, with the assistance of Mr Bronson, has examined the grammatical structure of the Namsangya dialect. Its general character is similar to that of the Burman and Tibetan, but the

notices of it are too brief to enable us to compare it fully with either. Its most striking peculiarity is its possession of an inflexional trait which places it in advance not only of the Burman but of the Tibetan and even of the Manshu, and allies it with the Dravirian, the Mongol, Turkish and African families. In the languages which we have hitherto examined the pronouns have presented features entirely crude. They have retained the isolation of other roots, and evinced no disposition to amalgamate with the verb, or to vary their forms with gender or number. The Naga pronoun carries us, at a leap, into the heart of a new formation, belonging to a much higher development than the Burman or the Tibetan. In the Naga pronoun the possessives are separate words. The agentive forms are *nga* I; *nang*, thou; *ate*, he &c. The possessives and plurals are not formed in the Burma-Tibetan manner by merely adding a word or particle of possession or plurality. They are, partially, distinct terms, and, partially, variations of the agentives.

	I	Thou	He &c.
Ag.	<i>nga</i>	<i>nang</i>	<i>ate</i>
Pl.	<i>nima</i>	<i>nema</i>	<i>sening</i>
Poss	<i>i</i>	<i>ma</i>	<i>a</i>
Postf.	<i>ang</i> or <i>ah</i>	<i>o</i>	<i>a, e</i>

In the union between the pronoun and verb a still higher development is shewn. Pronominal roots are suffixed to the word of action, undergoing phonetic changes, and, in some cases, coalescing with the time postfixes. Root, *thien*, "put." PRESENT,—1st Person *thien-ang*, 2nd P. *thien-o*, 3rd P. *thien-a* or *e*. PAST,—1st *thien-tak*, 2nd *thien-to*, 3rd *thien-ta*. PERFECT,—1st *la-thien-tak*, 2nd *la-thien-to*, 3rd *la-thien-ta*. FUTURE,—1st *i-thien-ang*, 2nd *i-thien-o*, 3rd *i-thien-a*.

The possessive and postfixal agentive forms are the same for the plural as for the singular. The pronominal postfix suffices by itself to denote the agentive pronoun. *Tra khatpa ilam-ang*, "that cloth-the want-I." *Tra minyang-nang lako-tak*, "that man-to give-did-I." But the pronoun may also precede the verb in its separate form, as in the flexional languages, and when the agentive is a substantive word the pronoun is still postfixed. *Ira katakrang-pa rang tiekta*, "this God-the heaven build-did-he." This is nearly as high a degree of inflection as any language can attain, and a most interesting and ethnically valuable trait in a language which, in local position and general character, is a genuine member of the Burmah-Tibetan family. It is, in one respect, even more highly inflectional than the Dravirian, for although *-ang* and *-ah* can be recognized in the pronoun *nga*, "I," *o* has no resemblance to *nang*, "thou." The *a, e* of the 3rd person is recognizable in *a*, "his, their" and *ate*, "he." The curious mixture of simplicity and complexity which characterises the pronominal system shews itself in yet another trait. In the potential mood the

pronoun is not only postfixed to the verb in the agentive form, but is prefixed to the auxiliary in the possessive form. *I-ta thien-ang*, "my-can put-I;" *mata thien-o*, "thy-can put-thou;" *ata thiena*, "his-can put-he;" i. e. "I, thou, he, can put." Most of the variations in the Namsangva pronouns appear to be referable to the blending of different systems, most of which were themselves modifications of a single system, the Gangetico-Ultraiindian.* The 1st and 2nd persons of the separate form *nga*, *nang*, are the G. Ultraiindian forms which extend as far west as the Magar. *Ate* is Burman and Gangetic. Of the forms that occur in the plural (*ni*, *ne*, *se*) *ni* is a variation of *nga* found in Limbu, Ho &c.; *ne* is Burm. (*nen*); and *se* appears to be a phonetic variation of the sing. *te*, similar to the Rajmahali *ath*, Uraon *asan*. Of the possessives *i*, *ma*, *a*, the first is Singphu, Burman and Tibetan; the second is Burm., Kol &c. (*am*); and the third is a contraction of *ate* as in the 3rd action postf. In Kiranti *am* is also the possessive form. The plural postf. of the 1st and 2nd person, *ma*, is probably Dravirian. *Mo*, occurs in Gurung. *Ning* resembles the Singphu *ni*, Murmi *ni*, and Miri *ding*. Both Murmi and Gurung have the 3rd person in *t*, (*the*, *thi*). The only form that is decidedly non-Burman is the second agentive postf. *o*, and this change of the vowel is perhaps referable to the influence of Abor-miri (*no*). The elements in this Naga pronominal system are all Burmah-Himalayan (although not confined to it). But their varied and quasi-flexional uses cannot be explained by Burman-Tibetan ideology. The system must have acquired its present shape under the influence of an ideology of a different development. The proper pronominal roots (i. e. the 1st and 2nd persons) of all the other Naga dialects are also in general G. Ultr. I, *nga*, (*ngai*, *nyi*, *ni*, *a*); Thon, *nang*, (*na*, *no*). The Mihan *ku* and Tablung *tau* are Lau and Anam terms. The so called 3rd person varies. *Pa*, *bu*, *pan*, is the most common. It is radically the same as the Dravirian and Tibetan labial definitive, and is found in some of the more western languages.

The Namsang plural postfix, *mu*, occurs also in Joboka. 1st *ku*, *kem*; 2nd *nang*, *hanzam*; 3rd *chua*, *hom*. The Mulung 1st p. is a curious form,—*"I" helam*, *"We" helan*, in which *m*, is S. instead of P., and *n* plural as in Kiranti and Murmi. Khari has a distinct plural for "we", *akau* which is "I" in Tablung (*tau*) and occurs also in "he" (*taupa*). "Ye" and "they" are *nikhala* and *tungkhala*. *Khaku* occurs also in the Tengsa *akhala* "we", *nakhala* "ye", and in the Nogaung *nakara* "ye". It is Dravirian. Tengsa prefixes *tebe* to the 3rd person and postfixes *chi* in the possessive, a Dravirian and Manchu directive (instrumental, ablative) which occurs in Garo also (inst.) The same possessive occurs in Mulung and Tablung under the form

* This system is fundamentally Dravirian.

sei. In Angami "we" postfixes "*we*" to the sing., (*awe*). "Ye" is *notoleli* and "they" *tothete*.

The Naga pronominal systems are a compound of Burmah—Tibetan, South Ultraindian and Gangetico-Dravirian traits, and afford a striking illustration of the effect of a mixture of pronouns of different formations not only in producing a redundancy of distinct roots, but in favouring the development of real and apparent flexions. In every case in which pronominal flexions or a diversity of roots (not factitious) exist, a blending of successive formations may be inferred. But it is seldom that the different elements can be so clearly traced to their sources as in the Naga group.

Another remarkable trait is, that although the time particle follows the action word in the past tense, according to the Burmah—Tibetan collocation, it precedes it in the completive past and future.

The Namsangya Naga possesses several traits which distinctly connect it with Tibetan. Such is the frequent use of the postfixes *pa*, *ma*, which Mr Robinson supposes to be merely euphonic, but which are evidently the common definitive postfixes of Tibetan. It has also a plural definitive postfix *he*, which is peculiar.* It is used with the demonstratives although not with the personal pronoun, —*Ara* this, *arahe* these; *ira* that, *irahe* those. The generic directive *nang* is a nasal variation of the Tibetan *na*, *la* (Singpho *na* possessive). It wants the possessive particles of Tibetan and Burman. The masculine particle *pony* is the Tibetan *po* nasalised. The feminine *nyong* is not Tibetan, but Kuki, Kumi &c. (Chinese "mother.") The Tibetan qualitative postfix does not occur, but the qualitives in this dialect almost invariably have the definitive prefix *a*, those in Naugong, Tengsa and Khari *ta*, *ma*. In the others the root is generally bare. The negative particle *mah*, which is postplaced, is the Tibetan and Burman *ma*.

From this account of the Naga languages it is evident that they have strong and specific affinities both to Burman and Tibetan, and have superadded to the T. Ultraindian basis some remarkable traits belonging to a distinct and more advanced formation. The definitive prefixes being separated from the roots, the vocabularies become mainly monosyllabic, with numerous Burman affinities, which embrace the pronouns. The primary formation may therefore be assumed to be the same as that of the Burman, the Tibetan being also a variety of it. A distinctive secondary Tibetan element has been superinduced, but it appears to be less essential than the higher foreign one which has developed the pronominal system into a condition between agglutination and flexion. The persistence of the T. Burman basis and the fact that the higher influence merely communica-

* It is probably identical with the pronominal *se*.

ted a formative tendency, shew that its source is not to be sought in the intrusion of a foreign race sufficiently numerous and powerful to assimilate the native tribes and languages. There may have been much intermixture, but the linguistic stock has remained T. Burman, although it has put forth a more luxuriant foliage. The character of the Nagas and of their customs appears to tell a similar tale. They resemble the Burman tribes, but they also differ from them much more than these tribes do from each other. They are less squat. They have not the very thick legs which distinguish all the Burman tribes. The head is more obtusely ovoid and the features are less prominent. Mr Grange speaking of the Angami or most S. W. tribe, who are a finer formed people than the Kachar Nagas, says "the young men in particular are fine, sleek, tall, well made youths, and many are very good looking." In their increased stature, diminished thickness, and tendency to ovoid heads, the Naga depart from the Burman and advance towards the Abor or sub-Tibetan type. In institutions, manners and customs they resemble the Kuki, on the one side, and the Mishmi and Abor, on the other. They are divided into numerous independent clans, essentially democratic, but with a hereditary chief called Khonbao, a Lau title* (*Tsa-bao* &c.) They have public halls called *murang*, as with the Mishmi and Abor, and here the bachelors live, as with the Rakhoing. Nationally they are jealous, vindictive, ferocious and in war retain some savage customs similar to those of the Kuki. Like the Burman and some of the E. Himalayan tribes they practice tattooing. They do not live in long village-houses like the Mishmi, Singphu &c.

Sec. 3. MIDDLE GANGETIC LANGUAGES.

Bodo and Dhimial. †

On the west the Naga march and intermix with the Rangtsa, a branch of the Kachari or Bodo. As they are mainly a people of the plains, are widely spread, and the race to which they belong forms the most important element in the pre-Arian ethnology of eastern India and the adjacent lands, I shall consider the Rangtsa in connection with the other ancient eastern tribes of the plains, before adverting to the hill tribes of the western extremity of the Assam chain, who have long been surrounded by the Kachari.

In phonology the Bodo and Dhimial are somewhat more advanced than the preceding languages of the Asam alliance. They are

* Village or clan-chief, radically Father or Patriarch. *Bao* is also Anam or Tonkin, Mongol &c.

† Hodgson's Grammar and Vocabulary in his Essay on the Kocch, Bodo and Dhimial tribes. Robinson's Grammatical notices and vocabulary of the Kachari or Bodo, J. A. S. 1849 part I.

more fluent and harmonic. Portions of words are more frequently elided to give them an euphonic union, and dissyllables are more common. But monosyllables are numerous, and in their general character these languages are identical with the Garo, Mikir and Miri. They are more free from compound consonantal sounds than the Naga, in which *ts*, *dz*, *ns*, *sn*, *nd*, and *nr* are preserved. The Bodo and Dhimal have only the common aspirates *kh*, *th*, *ph*, *bh*, *sh*, and a few vibratory compounds *br*, *pr*, *phr* &c. Bodo has also the aspirated liquids *lh*, *nh*. Double vowels occur not unfrequently, as in Miri and Kol. The nasal *n* is common and sometimes has a harsh guttural sound, which Mr Hodgson writes *gn*. The naso-guttural French *g* is frequent in Dhimal and sometimes harsh and prolonged. Bodo has a more surd tendency than Dhimal, frequently substituting *ch* for *j*, *t* for *d* and *k* for *g*.

The definitive prefixes are common, and most of the dissyllables are reducible into two roots, or a definitive and a root. Thus *ha* "earth," "land" (Bodo) recurs in *hasharha* "soil," *habdu*, "mud," *ha-duri* "dust," *hasar* "manure," *hajo* "a mountain," *hayen*, "a plain," *hagra* "a wooded plain," *hagung*, "dry uplands," *hakor* "a valley," *habrang* "a quagmire," *hatopla* "ashes." *A*, *na* and *ga*, *go*, *gi* &c. are common prefixes in Bodo. *Ya* and *mo* also occur. Definitive postfixes are used, sometimes with qualitatives. *Ka* is common in Dhimal,—e. g. *bhemka*, "heat," *chunka* "cold," *metika* "flame," *chipata* "silence," *maika* "fatigue." It is appended to most qualitatives, and is probably identical with the possessive *ko*. Bodo frequently forms, qualitatives by postfixing the possessive particle *ni*, with or without the definitive prefixes *ga*, *go*, *gi* &c. The two definitives *sma* *mo*, *bo*, and *no*, *na*, *a*, *ya*, are frequently used as postfix in Bodo. *Bi* is a favorite Bodo definitive. It forms the third personal pronoun *bi*, occurs in *be-jan* "boy," *imbe* "this," *habe* "that" (the Tibetan *ha*), *bipang* "how much," *Liganda* "how," &c., and is a common definitive prefix, e. g. *bigur*, the skin; *bikhung*, the back; *bidat*, flesh; *bibu*, bowels; *bikha*, liver; *bikla* "gall-bladder," *bibar* "flower," *bigot* "seed," *bithai* "fruit," *bidai* "juice," *bilai* "leaf," *bihi* "husband," *bishai* "wife," *bipha* "father," *bima* "mother," *bisha* "son," *bishu* "daughter," *bida* "brother." Some dissyllabic words have been also formed by vocalising the Tibeto-Burman bi-consonantal roots. Thus *lam* "road" becomes *lama* B., *dama* Dh.

The higher harmonic power of these languages is shewn not only in a greater tendency to euphonic ellipsis, but in the frequent euphonic accommodations of sound that take place in dissyllabic and trissyllabic words. This is well exemplified by the frequent assimilation of the vowel of a prefixed definitive to that of the root,—a Dravirian, Scythic and African trait. Thus the vowels of the definitive prefixes *ga* and *bi* are made to harmonise with that of the root in the following words: *Gu-phut* "white," *go-*

tchom "blue," *ga-tcha* "red,"; *gi-chi* "wet," *gu-chum* "short," *ge-chep*, "narrow," *gi-lit* "heavy," *ge-je* "central," *be-geng* "a bone."

Flexional and quasi-flexional traits occur, as in the other languages of this alliance. The Dhimal definitive *bi* appears under the form of *be* for female and *wa* for male in *bajan* "boy," *wajan* "girl,"—*jan* or *chan* meaning the young. In Bodo the same root is used for "boy," while it takes *-di* for "girl." It is curious that *wa* (he, she, it) is the Dhimal form of *bi*. The Dhimal postfixed pronominal plurals, the tense particles and the repetition of the pronoun after the verb, are traits similar to those that occur in some of the less harmonic languages of the same alliance (Naga.)

Bodo has a few generic words like Garo, Mikir &c. which are used in enumerating, *sa*, *san*, for human beings, *ma*, *man*, for other things, and *thai* for money. Dhimal uses only the generic *long* (Kumi). The same word occurs in the demonstrative under the form *dong*, but appropriated to animate, while *ta* is used for inanimate things; *idong* "This," *udong* "That." So *ita*, *uta*; so also *jedong*, "as," *kadong* "so," *udong*, *usang* "thus," *nhe-long* "both," *nhadong*, "than." The definitive is used as an instrumental postposition in both languages, *dong* Dh. *jong* B., and, what is more curious, it has in Bodo displaced the regular plural of the 1st personal pronoun which, instead of *ang chur* is simply *jong*. Is *jong* not properly a dual form of the first person formed by the elliptic tendency of the phonology, from *nhe-long*, both, Dh. i. e. two—the, "the two," which may have existed in Bodo under the B. form *nga-jong*? *Dong* is also used in Bodo as an emphatic assertive of the present, and (with *man* postfixed) of the past. The directives are postfixed,—Poss. *ni* B. (Garo, Dravirian, Scythic *ni*, Singp., Drav. *na*); *ko* Dh. (Miri, Changlo, *ga*; Tib., *gi*, *kyi*); Dat. *no* B., *eng* Dh. (Garo *na*, Miri *nape*, Naga *nang*, Tib. *la*); Obj., *kho* B. (Garo *kho*, Burm. *go*, Beng. *he*, Turk. *ga*, Drav. dat. *ku*, *ki*, *ge* &c.); Inst., *jong* B. *dong* Dh. (Kasia *jong* poss. and see previous remarks; Turk. *tan*, *den*, *dm*, Drav. *to*, *ta*, *te*). Bodo expresses plurality by postplacing *phur* and Dhimal *qalai* (Dravirian, *hālo*, Naga *khala*.)

The pronouns are, "I" *ang* B. (*anga* Garo, *jang* Changlo, *nga* Tib. Burm.) *ka*, Dim. (probably directly from *nga*, but *kha* is Anam, *kau* Siamese). "Thou" *nang* B. *na* Dh. (*na* Garo, *no* Miri, *nang* Mikir, Naga, Singpho). "He &c." *bi* B. *nha* Dh. (*ua* Gar, *u* Kas., *bu* Mir., and the Tibetan and Drav. labial definitive). Bodo forms the plural by *chur*, a variation of the substantive *phur*. The 1st person alone discards *chur*, and has a specific plural word, *jong*. Dhimal euphonically unites to the pronouns the Dravirian plural particle *el*, *l*, &c. *ka* "I", *kyel* "We"; *na*, "Thou", *nyel* "You"; *wa* "He &c." *ubal* "They". *Ubal* also means "these," the correlative being

ubal "those". I and U are used separately in the singular (this, that). But when human beings are indicated *dong* may be postfixed, while things takes *ta* (the wide spread definitive).

The Dhimal, like the Naga, postfixes the pronoun to the verb, but the postfixed being a perfect echo of the preplaced pronoun, the apparent flexion of the Naga is not exhibited. *Ka* hade *khika* "I go"; *kyel* hade *khikyel*, "we go"; *na* hade *khina*, "thou goest"; *nyel* hade *khinyel*, "you go"; *wa* hade *khi*, "he goes"; *ubal* hade *khi*, "they go". The assertive particles are *hi* (*khi*, *mhi*, *nhi*) and *ang*. *Hi* alone is generally used for the past, (*i*, present, Gond) and with the prefixed consonants, *k*, *m*, *n* for the present.* *Ang* is future, but one particle is often substituted for another as in Tibetan and other crude languages. The infinitive takes *li*; the present participle *katang* (possessive *ko*); the past *ka* alone; the remote past *teng*. Bodo renders the root assertive by postfixing *o* (euphonically *go* when a vowel precedes) as in Tibetan. In the past it becomes *a*, *ya* or *gai*, and in the future *nai*, corresponding with the Dhimal *ang*. The infinitive takes *no* (the dative particle); the present participle *in* (the possessive particle *nī*). *Na* is participial in Dravirian. The negatives are *da* B., *ma*, Dh. (Tib. Burm. Gar. Mik. &c.)

The general character of the structure is postpositional or inverse, but the direct collocation is often used, and Mr Hodgson notes, as one of their distinguishing characters, "a frequent absence of inversion that is unwonted in Indian [and in purer Tibeto-Burman] tongues." Qualitives may either precede or follow the substantives. So may numerals in Bodo, but in Dhimal they always precede. Directives are always postplaced, but they are frequently omitted. The objective generally precedes the verb, but it sometimes follows it. The following sentences are nearly Kasian or Mon, and not Tibetan, Burman or Dravirian, in their collocation. Thang nang hashing, ang thangdong pharon, B., "Go thou alone, I going-am village (to)". Tho gakhri Birna thangbai, B., "Go quickly, Birna gone-has" [Mr Hodgson remarks "in these two instances the construction is as direct as in English and would, I think, have been found so oftener if the Urdu questions had not told on the replies."] Jela na kai/na keng, ka higahika soko-lipta, ma hinkika, Dh., "When you call-did-you me-to, I was-(p.p.)-I house-within, not hear-did-I."

From this account of the Bodo and Dhimal, no doubt can remain that it was from the ancient formation of the Gangetic plain (whether it prevailed over Ultrahindia or not) that the harmonic phonology, and other non-Burma-Tibetan and non-Mon-Anam traits were communicated, in different degrees, to the adjacent tribes on both sides of the Assam valley. No linguistic data have been furnished for the other ancient Gangetic tribes of the

* The use of these prefixes with an assertive and tense power is a Tibetan trait.

plain and lower vallies of the Himalaya. The Bodo and Dhimal represent in the north a distinct formation, which we may term the Gangetic, extending along the Ganges and up the Bramaputra between the Tibetan and Burmán regions. At present the circuit of the influence of this formation embraces the lower Lhopa tribes (Changlo or Sanglo, very slightly, and probably also the Dophla*) the Akha, Abor, Miri, Mishmi, Singpho, Naga, Manipuri, Yuma, Mikir, Kasia and Garo. The proportion in which Dravirian, archaic Tibeto-Ultraindian, Scythic, Tibetan, Gangetic, Burman, and Mon-Anam elements enter into each of these languages will be considered presently.

Mikir.†

Between the Dhansiri and the Kopili, or in the district of Naugong, is the principal seat of the Mikir, but they are also spread along the southern side of Lower Assam. According to their own tradition their original country was to the S. E. of their present one, in Jyntia, a position which would place them between the Naga and Kasia. The language is similar in phonology to the Naga dialects. It has the abrupt tone and a slight nasal inflection, but its sounds are pure and liquid. It has definitive prefixes, *a*, sometimes *ar*, being the most common. I is also used, particularly with names of parts of the body. The other definitives of the Naga and Manipuri groups also occur, but not frequently. *Ka, pha, phu, ph* &c. The structure is Burmah-Tibetan. It has no possessive or objective postfix. The ablative postposition *para*, is the Bodo *phrai*. The dative *yok, ayok* is Dravirian. The definitive *po* postf. to verbs makes them personative (Tib.) The particles of gender are *alo m.* (*loh Kumi, lasa Singp*) *ape f.* It has a few segregatives, *bang*, man; *jon*, animals; inanimate things, *hong, pap*. The pronominal system is North Ultraindian. It does not possess the developed traits of the Naga, but in a few minor points resembles it. I. has a Dravirian plural postfix, *-li*, while substantives have none. The first person has different forms in the singular and plural *ne* "I," *ali* "we." In the second and third persons the singular undergoes a slight phonetic change. *Nang* "thou" *nali* "you"; *alang* "he, she, it," *anali* "they." The verb has no assertive postfix.

Garo.‡

The language of the Garo, who occupy the N. W. extremity of the Asam chain, agrees in its general character with the Bodo,

* The number of the Journal of the Asiatic Society containing Mr Robinson's paper on the Dophla language has not reached me. When I receive it I shall append some remarks upon it, if necessary.

† W. Robinson grammatical notices and vocabulary—J. A. S. xviii part II (1849) p. 330.

‡ W. Robinson J. A. S. xviii Pt. II (1849) p. 207 Grammar and Vocabulary. B. H. Hodgson Vocabulary Ib. p. 456. John Elliot A. R. iii (1799) p. 34, Vocabulary. N. Brown J. A. S. 1837 p. 132 Voc. furnished by Mr Strong.

Dhimal and Mikir. In its paucity of compound consonants it agrees with them and differs somewhat from Naga. Even the aspirates are rare, save the more sibilant, *th*, *ch*, *sh*. The lingering sibilant tendency is also shewn in the retention of *ts*, as in the Naga dialects. It affects vibratory compounds, *kr*, *pr*, &c., and it has even such finals as *rg*, *rj*. It wants the *dz*, *ns*, *sn*, *nd*, *nr* of Naga. In its particles it agrees more closely with Dhimal and Bodo than with any of the other adjacent languages. The postfixal directives are *kho*, "to," objective (Bodo *kho*); *na*, "to," dative (no Bod. *nang* Nag, *na* Tib.); *chi*, instrumental (Naga, Drav. Manchu); *ni* possessive (Bod.) The plural word is *rang*, "all," (Miri *arang*, Bengali *era*.) The words of gender are *bipha* m. and *bima* f., both Tibeto-Ultraindian. The prefix *bi* is the Bodo definitive and prefix. The possessive postfix is used to form qualitatives, and when a substantive is followed by a qualitative the directives are affixed to the latter.

It has three segregative particles like Mikir, *shak* man; *mang* animals (*bang*, "man," Mikir, *mang*, "boy," Singpho, *peng*, male, Nam. Naga.); *ge* things (the widely spread definitive.) The pronouns are N. Ultraindian and have the same degree of development as the Mikir. In the plurals the root is preserved, but the conjoined plural particles vary. Anga, "I," prefixes *chi*; *na'a*, "thou," postfixes *simong* (the first element in which is the same as *chi*.) *Ua*, "he" (Dhimal *Wa*, Mir. *bu*, Kas. *u*, Bodo *bi*) postfixes the common plural *rang*, interposing *ma*. The verb exhibits a Tibetan trait which has not been observed in the adjacent languages, the power of making a word assertive, by reduplication of its final sound, adding *a* when the root does not end in that vowel.

JOURNAL OF AN EXCURSION TO THE NATIVE PROVINCES ON
 JAVA IN THE YEAR 1828, DURING THE WAR WITH
 DIPO NEGORO.*

I have forgotten to mention an interesting part of the marriage ceremony. After the religious formula was over, and the bridegroom had done homage to all the male relations of both parties, he was led in state to meet the bride, who advanced with their female relatives from the inner apartments, and they met as it were half way. Both were then seated on the floor, and water was brought, with which the bride washed the feet of the bridegroom—this is in token of the obedience due from the wife to the husband.—Afterwards dry rice was brought, of which the bridegroom gave a part to the bride,—this is a symbol of the husband's obligation to provide for his wife's maintenance; the bride received it carefully in her cloth, not letting a single grain fall to the ground,—this betokens the economy with which the wife is to manage the household.—A *siri* stand with all its requisites was then produced, from which the bride and bridegroom each prepared a *siri* for the other,—this is a token of their living together and mutually assisting each other.—Two eggs were afterwards let fall, and broke on the pavement by one of the attendants; I did not quite understand the meaning of this part of the ceremony.—A Javanese hoe was next handed to the bridegroom, with which he raked up a little heap of sand; I believe this is a token that the husband is to cultivate the earth for their joint support, if necessary, which considering the rank of the parties on this occasion is not likely.—After these ceremonies, the bridegroom was led into the inner apartments, whither the bride also returned, each numerously attended, to change their dress for the evening.

July 2.—I was witness today to a singular ceremony, being a part of the regulated etiquette between the Court and European authorities. Two minor chiefs belonging to the Palace, in the Court dress (i. e. *undressed* from the waist up), with their hair hanging down in one long bunch behind, and their sarongs or petticoats twisted over their krises, came to the residency, and advanced in silence, and very formally, up the front steps into the verandah, where the Resident came to receive them. Taking their caps off, and standing together right before the Resident, who also stood, they communicated to him the *tabé*, or compliments of the Susunan, of the Ratus, or Queens, of the Princes of the blood, and the whole Court, naming the former severally; the Resident replied in the same manner, thanking the Susunan &c., and sending his compliments to them, each in return, by these deputies, who then made their bow very stiffly, and walked away

* Continued from p. 19.

in state and silence;—this ceremony takes place 3 times a week.

July 4.—This evening we passed at Prince Ingabey's, where a Chinese Wayang or play was exhibited, in honor of his daughter's marriage; the young couple were seated in front among the company, on chairs; before them stood a large round table, with tea, coffee, wine, cakes, &c. The piece appeared to be a tragicomedy, or melo-drama, for there was much fighting and killing, as well as laughing and singing, ghosts and buffoons succeeding each other on the stage; the music made so very discordant a noise that it gave us the headache; there certainly is much less harmony in Chinese than in Javanese music.—The female characters were performed by strapping Chinamen.

According to a long established custom, the Resident is obliged to send every day to the Susunan a number of dishes, (not less than four) from his kitchen, for the royal dinner,—they usually consist of fowls, prepared in various ways, to which pastry, or fish and vegetables are sometimes added. In return the Susunan from time to time sends the Resident *one* mango, or *two* oranges of a particular *kind*, according to which the value of the gift is estimated, and not by the quantity—whatever it may be, it is invariably carried under the gilt Payong or royal Umbrella.

July 6.—In the forenoon the Bride and Bridegroom came in state to the Residency house to pay a formal visit, accompanied by a numerous train of relatives and friends; the bridegroom was on horseback as before, the bride in a covered litter or palankeen, borne on men's shoulders, within which also sat her mother, two other female relatives, and three hunch-backed female dwarfs, her attendants bearing the siri box &c. This litter was of wood and split rattan, formed to imitate a dragon couchant, handsomely carved and gilt, but those who occupied it, seven in number, must have been very warm—two of the female attendants had fans of peacock's feathers, to fan the princesses with. The procession was opened, as on the day of the wedding, with a strong detachment of Mangko Negro's troops, who all wore wedding favors, of green, orange, and white—they marched in good style into the Court of the Residency, and drew up in double files to the sound of the drum—the same pomp and shew seemed to be displayed to-day as on that occasion, and the procession had a gay and lively effect, winding through the gateway of the Residency house to the sound of native music, as well as the Resident's band. The whole reminded me of the grand processions one sees at the theatres in Europe, especially in Operas and Melo-dramas, it must however be confessed that some parts of the show were rather ludicrous, from the abortive attempts at excessive grandeur and dignity and their singular contrasts. The young couple, with the nobles who accompanied them, were received by Mrs N. in the drawing-room, which was completely filled with the party—one glass of wine was drank all round to the health of the bride and bridegroom, after

which they rose and took leave, the procession returning in the same order as when they came.—They were now going to the Palace of the bridegroom's grandfather, Prince Mangko Negoro, and we heard the salute of guns fired by his artillery, in honor of the bride on her entrance into his house—here they remain till the day after to-morrow, when they are to come for a couple of days to the Residency, on a *familiar* visit. They had been to the Palace of the Susunan to pay their respects to His Highness in state, before they came to the Resident this morning—it seems to be a very fatiguing ceremony indeed, this marrying, among the Javanese nobility—"they order these things better in England," I think, but the Javanese would not.

Before sun-set, about a quarter to six, we proceeded to the Palace of Mangko Negoro, where a ball and supper was to take place in honor of the young couple—the Resident and his party were received with discharges of the Prince's musketry in very well fired volleys. The court around the *Pendopo*, or open hall, was illuminated with lamps, in triangular stands of bambu, but the interior was not so well lighted as at Prince Ingabey's; there was indeed a profusion of *muttons*, which flared about, dropping their melting superfluity on the luckless *understanders*, from the lustres suspended to the roof.—This *Pendopo* is the largest at Solo, or, I believe, on Java, (60 paces broad and 56 deep) and is certainly of noble dimensions, extremely lofty, and open all round. It is very cool and airy; too much so, indeed, at times, as the Resident's lady experienced, who caught a severe cold after the dance, from want of proper precaution.

This party might be described in nearly the same words as that of the 1st instant, except that it was not honored by the presence of the Emperor, between whom and Mangko Negoro a coolness subsists, owing partly to an arbitrary act of the former, which, as it is characteristic of the despotic sway of a Javanese sovereign, I will briefly describe here.

Mangko Negoro, being old and infirm, seldom rides on horseback, (which the Javanese in general are partial to), not being able to ride any but a gentle animal.—He had one that was both beautiful and gentle, the only one he could ride with ease, and which he was fond of. The Emperor unfortunately saw this horse, and immediately sent to demand it from the owner, (he is very partial to horses, and rides a great deal)—Mangko Negoro unwilling to give up his favorite steed appealed to the Resident, who advised him to yield to the demand of His Highness, in compliance with Javanese customs.

There were also fewer Europeans at this party than at Ingabey's, so that the supper table was smaller;—it was very well covered, however, and the toasts were drank as on that occasion. I was very unfit, from indisposition, to do honor to either, and in fact took no interest in what was going on, which may make my

account of it as dry and stupid, as I felt myself the whole evening, indeed I should have gone home early, but from reluctance to offend or hurt the Prince. I was glad to obey the Resident's summons to retire, at about 2 in the morning—in leaving the *Durbar* or Palace, we were greeted again by several volleys of musketry, which is unusual at the hour, but the Prince likes "playing at soldiers."

July 7.—This forenoon the Bride and Bridegroom (or rather the new married pair) arrived at the Residency, with the parents of the former, and several female relatives of both, to pass 2 or 3 days *en famille*, according to Javanese custom.—They came privately, that is in carriages, *without* a procession, and with few attendants, among whom were however three of the poor hunch-backed dwarfs, carrying the betel-box &c. The bride and bridegroom were splendidly dressed in purple and other bright colored silks, covered with gold spangles and embroidery; the former had still her elegant diadem or tiara on the head, composed of a wreath of separate gold flowers, studded with brilliants, each flower vibrating with the motion of the head,—it is rich and handsome, but must be heavy and uneasy to the wearer.

Unfortunately the Resident's lady was not able to receive the princely guests, having caught a violent cold at the dance on Monday night, which has confined her to her room since yesterday. They were therefore shewn to their apartments by the Resident and his daughter, to which they retired, and I believe kept great part of the day, no doubt fatigued with the festivities and late hours of the preceding ones.

In the evening attended the rehearsal of the comedy that is to be performed to-morrow. Being an old amateur, I took some interest in the business of the stage, and the manager being an old acquaintance, I made free to offer him a hint or two towards its better success—unfortunately the heroine of the piece was played by the tallest man of the company.

July 9.—This evening having been fixed for the performance of the *Confusion*, we proceeded *en corps* to the theatre at 7 o'clock, with the happy couple and their relatives.

The theatre has been constructed in the back verandah or gallery of a dwelling house, belonging to one of the public servants at the residency. Of course it is very small, but this objection, however, applies rather to the stage than to the audience part, which latter seemed large enough for the company assembled, including several native nobles. The Susunan and his Queens did not make their appearance as had been expected. A raised platform at the further end of the room was filled by four large sofas, on which the bridal party, the Resident and princes were seated; a row of neat benches filled up great part of the remainder of the hall, these were occupied by the rest of the audience, consisting of Civil and Military officers of Government, European and Semi-Euro-

pean inhabitants of Solo, native officers and chiefs, exhibiting a singular variety of complexion and costume. There might be about 100 spectators present altogether.

The orchestra which was led by the Military Commandant of the place, who performed on the bass, consisted of two or three European and half-caste and four or five native performers. They executed a little overture, and some pieces between the acts, very well as far as I could judge—the Commandant had taken much pains to prepare his assistants, and I was sorry to observe that his praiseworthy exertions were not rewarded by an attentive silence on the part of the audience, but how few among them appreciate “the magic of sweet sounds.”

The piece is a very bustling and amusing one when well performed, but on this occasion little could be said in praise of the actors in general; two of them only spoke loudly and clearly enough to be heard by all the audience, some of them seemed not to feel the characters they represented, and the female parts being performed by men, were of course very defective.

The native nobles and officers understood little or nothing of the plot or dialogue, but they seemed to relish the material humour of it well enough, and admired the thunder and lightning which were pretty well imitated, also the yawning and grimaces of one of the characters, a sleepy-headed country gentleman, and similar *visible* jokes, which they understood. I explained the principal part of the plot to those near me as well as I could, but I fear with little success; the wit and satire of *Kotzebu* were thrown away, not only on the Javanese, but on nearly the whole audience.

July 10.—In the evening a grand dinner at the residency house, in honor of the nuptials of the resident's protégé. Besides his family and the bride's, who are still lodged here, there was a number of other Javanese princes and chiefs present. Nearly sixty persons altogether sat down to dinner, at one long table; during and after dinner numerous toasts were drank, beginning with those of ceremony, as on the 1st instant, at Ingabey's supper.

The native guests seemed to understand the courtesies and customs of European tables, they drank wine with the ladies, and with us in regular style; two or three of them indeed, did not require this “excuse for the glass,” but seemed to love it for itself alone and were very *merry* about the close of the evening, which concluded with dancing, for such as were so inclined. The band that performed at this and other festivities, consisting of 10 or 12 natives, is kept up by a subscription among the European inhabitants of Solo, who provide them with a kind of uniform, music &c.. The resident I was told pays \$30 a month, for which the band performs at his house one evening in every week; this is a good plan at such a place as Solo.

July 11.—Early this morning accompanied the Resident in his carriage to *Kalitan*, about eight miles on the high road towards

Samarang, where he had an enquiry to make into some complaints against the native Chiefs, at which I assisted at his request.

This business was transacted in a house by the roadside, built by the Colonel as a private retreat, and a garden and small Coffee plantation were annexed to it.—It was a pleasant abode formerly, but has now gone to decay, in consequence of the orders of Government in May 1823, to dispossess European holders of land belonging to the native Chiefs, and return the lands to the owners. This ground belonged to the *Radin Adipati* or Prime Minister who has been obliged to take over the house built upon it by the Colonel, at a low value, which he is unable to pay, if he were willing—such is the inconsistency of the resolutions alluded to, which are detrimental to both the landlord and leaseholder.

We returned to Solo about eleven, and soon after the Bride and Bridegroom, with their family and attendants, left the Residency House in carriages, with a long train of attendants on foot and horseback—they proceeded to the Palace of the Bridegroom's grandfather, Prince Mangko Negoro, where they are to remain some days.

July 12—Among the customs which indicate the state of dependence in which the Native Sovereign is kept by the European authority, is one which at first surprised me—the Susunan cannot leave his *Kraton* or palace, even for half an hour, to take a ride or drive, without sending notice of it to the Resident, or during his absence to the Secretary.—His Highness is debarred by treaty from all intercourse and correspondence, not only with foreign Princes, but with any Native Power or Chief *on the island*, without express permission from the European Government—these restrictions were no doubt established with a political view, to prevent intrigues detrimental to European influence and interests.

July 13—Early this morning walked through the Christian burying ground here—the tombs are mostly of brick, with stones, engraved with the names, ages and situations in life of the occupants—the grammar and orthography of some of these forced a smile, even in this retreat sacred to the dead. Some of them also are records of human vanity—one large tomb, of a former Resident at this Court, tells us that he was a “Gentilhomme de Mecklenbnrg” and lest this should not be understood by all, the inscription is repeated in Dutch “Mecklenburger Edelman”. The stone of another tomb announces in letters of gold, that the “Hoog Wel Gebooren Heer” so and so, sleeps below, “in Zijne Hoog Wel Gebooren Leeven” Resident and Opper Koopman;—the “high and well-born” is now on a level with the poorest and meanest of those around him.—Many of these inscriptions begin with the word “Monument” spelt in half a dozen ways.—There is a stone to the memory of a Scotch soldier of the 78th Regt., who died here in 1816, with the following epitaph :

Gaily I liv'd, as ease and nature taught,
And spent my short life without a thought.
I'm surpris'd at death, that tyrant grim,
Who thought of me, that never thought of him !

This tomb was erected to him by his brother soldiers.

July 15—Surakarta, although the capital of the Native dominions, and the seat of the Susunan's Court and Government, offers to the eye of the visitor no appearance of a city—it is rather a collection of native villages, surrounding the *Kraton* or Royal Palace, within which many of the Nobles and Princes also have their dwellings—I have partly described this building before.—The other most conspicuous objects at *Solo*, are the Fort, the Chinese Camp or town, the Residency House, and those of the other European inhabitants,—these I will now briefly notice.

The Fort stands to the north of the *Kraton*, and within the reach of gun-shot of it, between the *Kraton* and the dwellings of the Europeans, obviously to defend the latter in case of attacks from the former, and to keep the fortified Palace itself in check.—The Residency house and offices were formerly in the Fort, but since the power of the Javanese Sovereigns has been so much reduced, and that of the European authority proportionally increased, this precaution has been abandoned, and the Resident's house and establishment are now situated outside the Fort, but close to it, and on the north or opposite side from the *Kraton*.

The Fort is an equal-sided square, or nearly so, with a broad ditch round it, over which are four drawbridges, leading to as many gates, facing the cardinal points; there are four bastions at the angles, each with ten embrasures for cannon, of which only twenty-one are occupied at present.—There is room within the Fort for a garrison of 300 men, but only about 100 are here now, most of whom are invalids, unfit for active service, from the effect of wounds or disease. The Fort is very much out of repair, and the expence required to repair it is estimated at 50,000 guilders—the repairs were about being commenced three years ago, when the troubles broke out, which are said to be the cause of the delay in putting the Fort into good repair. One would rather suppose they would only add to the expediency of doing so as quickly as possible, and the grand motive of economy cannot be alleged *here*, for all such repairs are done at the expence of the native Sovereigns, according to the treaties with them, and the amount is deducted from their annual stipend.

The buildings in the Fort, as well as the walls, are all of brick, covered partly with *Siraps* or Shingles, and partly with tiles. There are two or three wells of water in it—and in front are two tanks, in which the water at present is low and apparently stagnant, but this is the driest season of the year, which operates also on the *Bengawan* or Solo river, one of whose branches winds in front of

the Residency house, round part of the Chinese Camp, and before the North side of the Fort, which is opposite to the latter. It is now, like all rivers in this country, at its lowest ebb, so that it is crossed easily on foot and in many places the bed is quite dry.

The Chinese camp or village is situated opposite, or east of the residency house, on the other side of the river, over which there is a large bridge of brick and wood work leading to it. Having passed this, you enter an open space, with the houses of the Chinese all round it, and in the middle rows of sheds covered with *siraps* for the convenience of those who frequent the *passar* or market, which is held here every day. Beyond this is a wide street, with Chinese houses on each side, some of them very good ones apparently, but many more small and mean looking; this street is now terminated by a strong wooden barricade, on account of the war, beyond this is the carriage road leading to Prince Mangka Negoro's estate, called *Karang Pandang*, near the foot of the mountain *Luwu*.

The number of Chinese inhabitants here at present is estimated at about 500; they are from Amoy and Canton principally, very few of them are considered rich.

On the other side of the residency house, facing the fort, are also some Chinese buildings.

The Residency House is a large and handsome lower-roomed building, solidly built of brick, with a roof of *sirap* and floored with a composition of chunam and sand—there are ten rooms in it, two front and two back verandahs, with an open space or hall for dining in the middle—the house is lofty, built on a raised foundation, and the doors and windows furnished all round with venetians, so that it is generally cool. At Solo this is doubly necessary to comfort, for the air is warm, and the site low—the court before the house is planted with stately large Banyan and other trees, in which are thousands of the small birds called in England Java sparrows: these absolutely darken the air at times, and when they rise to fly from the trees, the sound resembles a violent gale of wind—on the right side of the Resident's dwelling house is a row of two storied buildings containing his office, treasury, store-rooms, guard-house, &c. which is very convenient.

Behind is a tolerably large garden, now not in the best order, it being difficult to procure work people during the war—in it there is a good bathing-house with a large circular bath attached for swimming, but it is now dry, the aqueduct that supplied this and other places having been destroyed by the insurgents. Beyond the bath is a kind of summer-house, elevated above the garden-wall, beyond which is a small park with deer and cows.

On both sides of the Residency house are other European dwellings, that on the left or north side is now inhabited by the Secretary—on the right is a tavern or hotel, tolerably large and commodious, the proprietor of which is likewise Postmaster, or

rather contractor for the post horses between these districts and the town of Samarang, no Government post establishment being kept upon this road as formerly. Connected with this now is a military canteen, where the European soldiers are sometimes merry in the evening. Beyond this is a kind of European store or shop, which was not very well supplied when I visited it—I believe it is the only one at Surakarta.

The other European dwellings are opposite to the east side of the fort in a straight line, with back streets or lanes branching off from it. The military hospital is at the bottom of one of these streets, overlooking the river, and seems to be one of the best houses at Solo. Several of them are roomy and substantial, though not elegant buildings, in those that have upper stories, the roof is very low—some of them are surrounded by high brick walls of dirty white: the greater part of these houses have been built so near to the fort, that its guns could not be used without injuring them—they are all of brick and mortar with roofs of shingle, which looks well when kept in repair.

There is no church or chapel at Solo, but to make up for the deficiency there are 2 or 3 church-yards—one of them is now disused, being quite full; it is opposite to the S. E. angle of the fort, close to the houses; the other is a short distance beyond it, and came into use 6 years ago, it is now nearly full—on the pillars at the gate is cut the name “Rusthof” and the date 1822; a third burying ground near the fort is yet unoccupied.

The Susunan or Emperor, as we call him, is Pakoe Boeana the 6th and was never educated for the throne, or expected to succeed to it. He is the *illegitimate* son of the late Susunan Pakoeboana the 5th, who died in 182 at the age of 3, during the residency of Mr McGillavry. What it was that directed the choice of Government to the present Susunan I do not know, but he is considered very unfit for the dignity, as well as a bad private character. Before his elevation he used to sit at the feet of the *Radin Adipati* or Prime minister, and carry his betel-box according to Javan custom, being his pupil—now, his former master has become his servant, and must sit at his feet, they have changed situations completely. The Susunan is generally looked upon here, as a cruel, tyrannical, yet weak and capricious prince,—perhaps these latter qualities often accompany the former, he has no dignity whatever in external appearance, in which some Javan chiefs are not entirely deficient—he is short and small in person, his features have somewhat of a feminine cast, his voice is low, his eyes have at times a disagreeable expression, though when he chuses he can assume rather a pleasing cast of countenance with a good humoured smile, which I fear is often hypocritical. His father Pakoeboeana the 5th was more unpollished and boisterous in manner and voice, but also more open-hearted and sincere. His grandfather Pakoeboeana the 4th was a complete courtier,

extremely well-bred and polished in manners, dignified yet affable, but a great intriguer and hypocrite. He ascended the throne in 1788, on the death of his father Pakoeboeana the 3rd in whose reign the empire of Java was divided into the two kingdoms of Surakarta and Jokjocarta. On the conquest of Java by the English forces in 1811, this Susunan (Pakoeboeana the 4th) sent a deputation to congratulate them and express his joy at the event. About a year afterwards he conspired with the Sultan of Jokjocarta, Amangkoeboeana the 2nd, in a plot to undermine the British authority, which occasioned the expedition of General Gillespie to that place in 1812, when the Kraton was taken by assault, with the Sultan and all his family and treasures in it.—He was then deposed, and subsequently banished to Amboyna by the Dutch in 1816. It was this expedition that led to the treaty of 1st August, 1812, between the then Lieutenant Governor Raffles, the grandfather of the present Susunan above described and the 3rd Sultan of Jokjocarta, by which several valuable provinces were ceded to the European Government by both Princes, with the management of the bazar and toll-post duties, and other important advantages in the native territories.—It may be said that this treaty effected a great change, and struck a severe blow at the power and independence of the native Sovereigns, who have since been little better than Regents or Governors of their remaining districts, subject to the control of the European Government, which holds all the forts in their dominions and only allows them to maintain a guard of honor of 1000 men.

The empty shew of authority and independence is still left to them, but even this is much less *now* than in the time of the Company, when even Europeans, meeting the golden umbrella of the Emperor, though only carried over his horse, were obliged to stop and salute it by uncovering, and if in a carriage, to get out while it passed: and when the Resident or as he was then called *Minister* of the Dutch at the Court, held, on great public occasions of festivity, the gold basin and ewer for the Susunan to wash his hands before supper.

To return to the present Susunan, it is generally supposed that he, and many of his Court, were inclined to join the rebel Princes of Jokjocarta against the European Government, when the present war broke out in 1825; it is indeed strongly suspected, that communications had been opened between those Princes and the Court of Solo, before the beginning of the disturbances, and even that a promise of co-operation had been secretly held out to the former by the latter, before the arrival of General DeKock, the Lieutenant-Governor, who proceeded to Solo immediately on the first news of the insurrection reaching Batavia in the end of July, and whose timely appearance and judicious measures, in all probability, went far to prevent such a combination, the results of which must have at that time been almost fatal to the European

authority in these provinces, as their entire population, estimated at near two millions,* would then probably have risen against us.

The behaviour of the Susunan to his third wife or Ratu, elder sister of the lady whose nuptials I attended lately, and daughter of the Pangerang Adipati or Prince Ingabey, his great uncle, gives a very unfavorable opinion of his character.

He was betrothed to this young lady, whom he had himself selected, before his elevation to the throne; after that event, he was not only desirous of breaking off the engagement, but wished her to become one of his concubines—this was refused by herself and her parents, of course, and he afterwards agreed to marry her, but only, as it would seem, out of revenge and anger at their refusal, for very soon after their marriage he neglected and treated her ill; his bad usage of her increased with time, till she begged of her father to take her home again, as she could not submit to the treatment she experienced from the Susunan. It may be remarked that this treatment must have been very bad to urge her to such complaints, for in general the wives of Javanese of rank are submissive and resigned. The matter became public and was enquired into by the late Resident. The Susunan shewed a desire to repudiate his wife, merely alleging as a cause that he did not like her hair and other trivial objections—at length with the sanction of the European Government, and the concurrence of all parties, a legal divorce, according to Mahomedan law, was effected between them, and the poor Sultana returned to her father's roof, much to her satisfaction. Very lately, however, since the wedding of her sister, the Susunan has made proposals, both to his late queen and her father, to take her back again—to these proposals neither of them, very properly, will accede, and the lady is said to have begged of her father rather to take her life, than send her back to the palace—the dislike and fear of a husband must be very strong, which can inspire in the usually indifferent bosom of a Javanese female so rooted a repugnance, and make her willingly resign the honors and distinctions which she would be entitled to as Ratu of the reigning Susunan—and this tells, I think, much against her husband. She is a rather pretty woman for a Javanese, of fair complexion, and open, good-humoured countenance, frequently smiling, and appearing by her manner on the occasions when I have seen her, not much to lament the loss of her high rank, which indeed was but gilded slavery. I must not omit to mention that this whole business has made the Susunan deservedly unpopular, as well at his Court, as among Europeans, and that the Javanese are particularly displeased at his asking for his wife back again, after they had been divorced, which they say is mean and unbecoming in him, who may have as many wives as he pleases.

But his behaviour on another occasion of a nature somewhat

* Now about one-half of this number only.

similar, was infinitely worse, and amounted in fact to barbarous murder. Being attracted by the appearance of a girl living in some part of the Kraton, a daughter, I believe, of a minor chief, he ordered her to be brought before him, and proposed to her to enter into his band of Serimpi or dancing girls, who are generally among the concubines of the prince. She declined this honor, on the ground that she would afterwards be despised by those of her own rank, and consequently that no respectable chief would allow her to enter his family by marriage—it is probable that she had already made her choice for life, or been betrothed by her parents to some youth of similar rank—her refusal so incensed the tyrant, that he had her publicly strangled in the front court of the palace, before the Resident was informed of the circumstance; when it afterwards became known, he took upon himself to give the Susunan an earnest admonition in private on the subject.

The territories remaining subject to the Court of Surakarta, since the cessions of 1812, have been estimated to contain nearly one million of souls, and those of the other native Sovereign (Mataram or Jokjocarta) nearly 700,000, while their joint dominions are supposed to be from 11 to 12,000 square miles in extent, or about one-fourth part of the whole island, between the two European provinces of Cheribon on the west, and Surabaya on the east, bounded on the south by the sea, and on the north by the European residencies of Tagal, Pekalongan, Samarang, Japara, and Rembang. Although the empire of the Java sovereigns, therefore, has been considerably reduced since their connection with Europeans, by the conquests and acquisitions which the latter from time to time have made, there yet remains a large and well-inhabited part of the country under their controul, comprising, indeed, some of its richest provinces. How long it will remain subject to them is a problem—the present war will perhaps effect, or at least accelerate, some important changes in the administration of the country; it has made it evident, that the sovereigns have not sufficient power to keep their territories in peace and tranquillity, nor to put down their rebellious subjects, and this may perhaps lead to the conclusion, on the part of the European Government, that it is warranted to assume a more direct and active interference in the management of the country, for the general advantage and more especially (as usual) its own.

The present division of the land between the two Courts, is singular, and liable to many objections. Instead of having each a defined frontier, the territories of Solo are intersected and mixed with those of Jokjocarta, running into and crossing each other; in many parts a village belongs half to one and half to the other Court, and chiefs appointed by both are placed in it, each of whom is only responsible for his share of the land, and has no controul over the inhabitants of the other part. The motive for dividing

the country in this extraordinary manner, which was done by a Commission after the "War of Java" in 1758, is not accurately known; some think it was done at the suggestion of the European authorities of that day, in order to provide a ready check upon any future rising of the country against them, by thus splitting its government and interests, so as to allow of one-half of the population being employed to keep the other half at bay, on the well known principle *divide et impera*; whatever may have been the real cause of the measure, its consequences have now proved very injurious, both to the European government, and to those of its native feudatories and vassals who have kept faith with it, during the present disturbances, for their lands and subjects being confounded with those of the rebel princes, have suffered the attacks and devastations of both parties, and are unable to pay their revenues, and in many places to contribute anything to their own defence from the rebel bands.

July 16—We left the Residency house before sun-rise this morning, in the Resident's carriage, for Klatten; the first part of the road was the same as that by which I came from Bargulali,—the last stage on that occasion, that is from Kalitan, being the first on this; the road makes an angle here, one branch proceeding in a N. W. direction to Bargulali, Salatiga and Samarang, the other in a S. W. course to Klatten and Jokjocarta. Near this angle are the remains of Kartasura, the former capital, from whence the Court was removed to Surakarta, in 1742; there are many brick walls and courts of the Kraton or Palace remaining, and a piece of water, the sides of which were planted with trees.

Having changed horses at Kalitan, we struck into the S. W. branch of the road, and proceeded towards Dilangoe, where is a benting or stockade to protect the communication. All the bridges had been destroyed by the rebels, and were repaired in a temporary manner with bambu &c., some of them looked rather unsafe, but we passed over all without accident; at one bridge, indeed, we were obliged to get out of the carriage, for a heavy cart had sunk with one of its wheels through the bambu flooring, this obstructed the passage, and rendered it more precarious. At Dilangoe saddle horses had been previously stationed, and we pursued the journey from hence on horseback, without stopping, in order to avoid the increasing heat of the sun.

We passed over two *ci-devant* rivers whose beds had been filled up by a stream of volcanic earth, from the Merapi, when it exploded five years ago; it was a deep black sand, full of pebbles and many large stones, most of them still shewing the effects of violent heat. In one of these places a small shallow stream of water remained and spread itself over this bed of sand, the other ex-river was quite dry, and its former bed could only be distinguished from the surrounding soil, by the deep colour of the sand, and the absence of vegetation on it. The face of the country

must frequently change in these regions, from the effects of those convulsions of nature.

The road we were now travelling was often beset by the rebels in 1826-7, and Captain S. who now accompanied us, once narrowly escaped from them or a spot he pointed out, while conveying a letter from Klatten to General DeKock at Solo—he was quite alone, and only saved his life by the fleetness of his horse, and leaping across a water course, where the bridge had been burnt. We reached Klatten about half past 10.

On the road a letter was delivered to the Resident from Jokjocarta announcing some successes of the troops against the enemy, among which I was sorry to hear of an affair between some cavalry and an armed party of natives escorting several women of rank, who were all, it was said, put to death, and their ornaments carried off.

July 17—The fort here, like that of Solo, is nearly square, flanked by four bastions at the angles, which are pierced for 32 guns, but only 19 or 20 are now mounted, 2 or 3 of which are without carriages, and some of them on ship's carriages, they are 8 pounders.—There is room in the Fort for about 200 men, with Commandant's and officer's quarters, store-house for provisions, guard-house, powder-magazine &c, all of brick, there is a good ditch, with walled embankments on both sides, nine feet deep, and about sixteen wide, with drawbridge in front and rear. This Fort was built under the superintendence of an European Engineer, begun in 1804 and ended in 1806, as appears by the date over the gateways.

July 18—There is a hospital behind the Fort, constructed of bambu, with straw roof, since the commencement of the war. To this the sick military are sent from the adjacent bentings and columns, often in a dying state, carried in an uneasy *tandu* or bambu litter, half sheltered from the sun, and being a day or two on the road, no wonder so few of them are rendered fit for service again, by the Surgeons of the 2nd and 3rd class, who are generally stationed at these places, and many of whom are ignorant and careless. There are now sixty sick soldiers in this hospital, at times the number is greater, and 150 have been here at once; of these sixty, only 10 are natives, and the rest Europeans, they are now building a new hospital of the same materials, but on a higher situation.

This village was formerly well built, kept in good order, and the road through it paved and lined with fruit trees. It was inhabited by several wealthy Chinese, and some half caste Europeans, and being half way between the two native Courts, and in the high road from Samarang, was advantageously situated for traffic, but it has been burnt and greatly injured during the war and now consists of bambu and straw huts, inhabited chiefly by poor people and coolies. It has a beautiful view of the mountains

Merapi and Merbabu, which are near it ; the former may be 10 miles distant.

July 18—I was to have taken a ride this morning on a pony kindly lent me by the Commandant, and which was recommended as a quiet animal ; scarcely had I mounted him, however, than he began to snort and rear ; at almost every object on the road he started, and at length set off with me at full speed towards the bridge, against which I expected to be thrown every moment. I stopped his career with difficulty, however, dismounted and led him back to the Fort, not being inclined to risk my neck again ; on enquiry, it appeared that he not been ridden for above three weeks and during this time had been well fed with padi, contrary to the Commandant's orders, it was not a matter of surprise, therefore, that he had become wilful.

Being thus obliged to give up the projected ride, I tried to console myself by a good walk, along the high road, there being no other place to walk in, except the muddy rice-fields. The road was covered with carts, each drawn by two oxen, belonging to government, and used for conveying rice, arrack, wine, copper money &c, to the different Forts and stations for the Military,—the same service is also performed by *glidaks* or packhorses, which carry from 200 to 250 pounds weight, divided and slung to the saddle on each side ; they are miserable looking creatures, often with sore backs and sides, each led by a Javanese, with a whip.

July 20—We were invited this morning to a public breakfast, or native party, given by one of the Tumongongs, or native chiefs of the place, to celebrate his son's nomination as his Wakil or Deputy. This man's house and property had been burnt and plundered by the insurgents, so that he is now poor and badly provided for such an occasion. Accordingly the tables, chairs, wine, plates &c, were all borrowed from his European friends, who were of the party. Before and after the meal three *rong'gengs* or dancing girls performed for our amusement, to the sounds of the gamelan. Their attitudes were rather awkward than graceful, and their motions of the body and limbs anything but natural or pleasing and very unlike the plate in Raffles' History of Java. But this was not so bad as their singing, which is so loud and shrill that it may rather be called screaming, drowning the softer tones of the instruments—I understood scarcely a word. Both the Tumongongs danced a short time with the *rong'gengs*, notwithstanding our host was an old man, and had been wounded in the leg,—the other is younger, rather well looking, and really shewed some grace in his attitudes and the way he held up his fine painted sarong or petticoat ; he gave each of the girls a Spanish dollar on quitting the dance, who received it on their knees, with the usual salam or obeisance ;—these women sometimes amass a little fortune in this way.

July 12—We were to have started at five this morning to visit

the ruined Temples at and near Brambanan, but it had rained from three o'clock, and continued raining till past seven, which had nearly made us put off the excursion; as it afterwards cleared up, however, we resolved to go, and set off accordingly at half-past 8, along the high road towards Jokjocarta.

During the first part of our ride, the fields on each side of the road appeared well cultivated; in many places an intermediate crop of cotton was growing, in others a second half annual crop of rice, many labourers of both sexes in the fields, and numerous petty traders on the road. These are pretty sure indications of returning quiet and confidence. The latter part of the ride near to and beyond the river Upa, which forms the boundary between the districts of Pagang and Matarem, exhibited a melancholy contrast; here very little land is to be seen under cultivation, scarcely a solitary pair of oxen at the plough, while the allang or wild long grass shews that the ground has been untilled for some years. The depas or villages in this track are partly deserted, the inhabitants having fled to more tranquil parts of the country, some have joined the rebels, and others fallen victims to the disturbances. Most of these villages, indeed, have been burnt by one or both of the contending parties, their coffee plantations destroyed, and their cocoanut and other fruit trees cut down. It is melancholy to see so fertile and beautiful a country, so enriched and adorned by nature, thus ruined and desolated by the spoiling hand of man.

We passed over numerous bridges, or rather the remains of them, which had been well built of brick work and timber;—the latter was burnt and torn away, the former much injured by the insurgent bands to impede the Europeans on their march; in some places the bridges have been again made passable, by a temporary flooring of bamboo or cocoanut trees, in others we had to ford the shallow streams. The bed of one of the rivers was quite filled up with volcanic sand from the Merapi, like those I had observed between Solo and Klatten. I could trace the limit of the former bank, and even a part of the breastwork of the bridge, now buried in the sand, no water whatever was now visible.

The country became wilder and less cultivated, and the road less frequented, as we approached Brambanan. Here is a bending or field stockade with two large guns, one pointing towards the high road, the other towards the southern hills, behind the stockade; a little further is the cantonment, a long range of bambu sheds, in three files, erected in Nov. 1827, and occupied by the 3rd moveable column, under Lieutenant-Colonel Le B., consisting of about 500 regular troops and about 400 auxiliaries. The greater part of this force is absent, having marched yesterday morning to construct a stockade near a village some miles off, called Kambanganan. The sick and invalid soldiers only remain, with some of the auxiliary natives, about 150 altogether, under the command of a *sick* Lieutenant of the expedition—here is also a Lieutenant of

artillery, with three field pieces, and an assistant surgeon; these gentlemen received us kindly at their mess-room, a large open shed or barn, where we arrived at half-past 10.

Having breakfasted, and recruited ourselves with rest and a few glasses of claret, we proceeded to the nearest temple about noon; it is at a short distance to the right of the road, across the rice fields, in which are scattered about broken images and other fragments of these antiquities; some remains of stone walls might be traced here and there, (it is said that the temples were formerly surrounded by a double enclosure). Arriving at the foot of a high heap of ruins we descended from our horses and clambered over the fallen stones, which entirely conceal the original form of the building, being moreover entwined and covered with the luxuriant vegetation.

At about 25 feet from the ground is a doorway, opening into a cell or chapel, about 8 feet square, with a pinnacle or tower roof 30 feet high at least; in this cell, fronting the door, is an image of the Hindu Goddess *Durga* or *Bhavani*, called *Emboh Loro Jongrang* by the Javanese, standing on a bull's back, whose tail she holds in one of her six hands, on the other side another hand holds the hair of the dwarf or evil spirit *Madeva* (?) who stands on the animal's head with a dagger, as in the plates of Raffles' History of Java—the four other hands hold various attributes of Hindu Mythology—before the image is a cavity, that seems to have been a reservoir or well, but is now filled up with the fallen stones from the roof. The image is in good preservation, colored with yellow powder, and a small earthen pot was standing before it, in which it appeared that incense had burnt recently; these particulars shew that the Javanese have still some species of veneration for the idol, although they have been so long ago converted to Mahomedanism.—The roof of this cell slopes up to the top, which is covered by one stone; the stones that form it are regularly arranged, one above another, like steps reversed, and it is difficult, on first looking up, to conceive how they retain their situation, for there is no cement whatever used in the building.

From this chapel we scrambled to another (over heaps of stones and bushes) of similar dimensions, where is an image of the Hindu idol *Ganesa*, called by the Javanese *Gaja Mado*—it has an elephant's head, the trunk is employed in feeding itself from a cup on the left hand, it sits on a pedestal, cross-legged, with a protuberant belly, but without the chaplet of the skulls sometimes seen around it. I think skulls were represented in the sculptured border around the walls of the cell, which was much defaced, and from want of light could not be clearly distinguished.

These smaller temples were probably only chapels to the large one in the centre of the pyramid, but this we found inaccessible, being thickly overgrown with bushes, and encumbered with heaps of fallen stones, through which in their present state it would be impossible to penetrate.

We therefore mounted our horses, and proceeded further across the rice fields, where the paths and water courses in many places are formed (or repaired) with carved stones. At about a mile from the first ruins we saw the Temples called Chandi Scwo, or the thousand Temples, the approach to which was guarded, at each of the 4 sides, by two giant centinels kneeling with one leg on pedestals. These figures face each other, are about 7 feet high, of one mass of stone, well carved, and much ornamented, they hold a club or mace in one hand, and a snake winds round the arm,—the countenance is very unlike the Javanese, the hair in curls, regularly arranged round the head, something in the style of an old fashioned wig.

Beyond these gigantic guards we crossed the remains of a wall of large stones and of steps which led up to the Temples, these were highly ornamented with sculpture, both within and without,—numerous niches, some without figures, others with the remains of them, more or less mutilated,—arcades pointed like the gothic, beautiful borders of arabesque, urns with flowers and other ornaments designed with great taste, and executed with perfect regularity—scarcely any part of the wall is of plain stones. It equals, if it does not surpass, in elaborate ornament what is now called the florid gothic in Europe—the centre Temple is a square apartment about 30 feet high, with a pinnacle or pyramidal roof of about the same height, in the form of an octagon, the stones projecting one above the other—this large apartment communicates with the smaller ones on each side, by small portals of three arches, it has a large altar facing the east, now unoccupied, with steps leading up to the back of it.

There must have been many smaller Temples around this principal one. Some of them are still in tolerable preservation, others are but a heap of ruins, and small parts of some are only visible through the bushes which have grown round them.

According to Javanese superstition, these once magnificent buildings are the work of Genii.—The tradition was briefly communicated to me, by a Chief or Regent who accompanied us, as follows:—

Embok Loro Jongrang was the daughter of the Sovereign of this country, called Ratu Boko, and was asked in marriage by the son (Bandung Bondowosso) of a neighbouring monarch, who by his great strength, courage and skill, had obtained much influence among the good and evil spirits. The princess disliked her lover, and to escape the match when pressed upon her by her parents, adopted this stratagem. She exacted, as the condition of her accepting the prince, that he should cause to be built in one night 1000 Temples of stone, each containing her image. The prince undertook to perform the task, and retired to prayer and meditation,—while thus engaged, the virtue of his invocations and prayers had the desired effect, and the Temples began to rise from the

earth in a finished state and regular order, till the whole plain was nearly covered with the buildings.—The princess had the curiosity to come and watch, and to her infinite surprise, saw, what she had supposed impossible, Temple rising after Temple with great rapidity. She now became alarmed lest the Prince should fulfil the condition, and claim her hand in the morning. In order to break off his internal devotions, she ordered all her female attendants to pound on the rice mortars (wooden troughs in which the rice is cleared from the husk, by long wooden pestles), these sounds disturbed the prince's abstracted meditations, and made him think that the dawn had broke and night ended. He accordingly left off his prayers, and the Temples ceased to rise immediately. There wanted now but *one* to complete the thousand. He rose and met the princess who pointed this out to him and taunted him with the failure, and rejected him accordingly. The prince sat down to lament his misfortune and the quick passage of the night, as he supposed, but soon discovered, by the continued obscurity, the fraud of the princess. This turned his love into anger and abhorrence, and he made a vow of seclusion.* The disappointment of the prince and the deceit of the lady, caused a war between the states of their parents, which long disturbed the tranquillity of Java, and desolated a great part of the country.

This fable was probably invented to account for the existence of buildings, which the present inhabitants look upon as beyond the skill of man to raise.

The great heat prevented my examining these interesting ruins so minutely as I could have wished, and unfortunately I was the only one of the party who thought it worth the trouble, so that I was obliged to return, after a hasty survey of the most accessible parts, to the cantonment, where we arrived about $\frac{1}{2}$ past 1, and resolved to rest till the mid-day heat should subside.

While here, news arrived of the insurgents having attacked two of our posts during the night, in a party supposed to be about 300 strong;—the native commander of one of these posts, a brave looking old man, came to report the circumstances,—he said he had fired 200 cartridges, and asked for a fresh supply; 4 of the rebels had been killed at the other post, which is also under a native officer, who had fired a gun at them, and then sallied out upon the body, which soon dispersed;—the officers at Brambanan told us they had heard the report of the gun in the night.

At about 4 o'clock we set out again to visit some more ruins, about 2 miles further on the road to Jokjo, near Kulassan;

* On looking over the above, I find I have omitted a part of the Javanese legend regarding the thousand temples. When the prince discovered the fraud that had been put upon him by his mistress and her female attendants, he invoked the supernatural powers to punish the females of that country, by preventing them from marrying till a late age; this curse is to said to be still in operation, for the women in this neighbourhood are not married till the age of 20 or more, whereas the general custom of the country is to marry at 13 or 14.

here is another benteng or field fortification, partly built of the ruins of a Chinese sugar manufactory, which was attacked by the insurgents in the early part of the troubles and plundered, several of the Chinese being murdered. These sugar works were themselves erected on the site, and partly with the materials, of some ruined Hindu edifices, the images of which still ornament the entrance. Little did the founders of these grand Temples, long ages ago, contemplate their subsequent profanation, or think they would in after times be used as a sugar mill by sordid Chinese, or as fortifications by Europeans, a race then unknown in India.

(To be Continued.)

ERRATA in the "Journal of an Excursion to the native provinces on Java in 1828," in the January No.

Page	3	from bottom	line	17	for	Demack	read	Damak
"	"	"	"	15	"	was	"	were
"	6	from top	"	21	"	3 $\frac{1}{2}$ d	"	6 $\frac{1}{2}$ d
"	7	"	"	8	"	bye	"	by
"	"	"	"	10	"	and two	"	and
"	"	"	"	12	"	or three	"	two or three
"	"	"	"	23	"	rebels	"	rebel
"	"	from bottom	"	13	"	was	"	were
"	"	"	"	5	"	Lawie	"	Lawu
"	"	8 from top	"	3	"	soldier	"	soldiers
"	"	"	"	9	"	sun	"	soon
"	"	"	"	12	"	Lawie	"	Lawu
"	9	first line	"	"	"	Alam-alam	read	Alun-alun
"	"	from bottom	"	15	"	purposes	"	purpose
"	10	from top	"	9	"	was placed	read	were placed
"	"	"	"	14	"	Pangarang	"	Pangerang
"	"	"	"	20	"	Bunie	"	Bumi
"	12	from bottom	"	22	"	Alam-alam	"	Alun-alun
"	"	"	"	15	"	"	"	"
"	"	"	"	8	"	"	"	"
"	"	"	"	7	"	common	"	cannon
"	13	from top	"	23	"	receiving	"	received
"	"	from bottom	"	5	"	of of	"	of
"	14	"	"	18	"	was	"	were
"	15	"	"	21	"	this	"	the
"	17	from top	"	12	"	chandaliers	"	chandeliers
"	"	"	"	25	"	a	"	an
"	19	from bottom	"	6	"	collars	"	collar

THE
JOURNAL
OF
THE INDIAN ARCHIPELAGO
AND
EASTERN ASIA.

LEGEND OF THE BURMESE BUDHA, CALLED GAUDAMA.*

By the Revd. P. BIGANDET.

CHAPTER 6TH (*Continued.*)

Phralaong having left the king, fell in with a Rathee, ⁴⁵ or hermit, named Alara, and inquired about the several Dzanes. Alara satisfied him on seven kinds of Dzanes, but as regards the eighth, he was obliged to refer him to another Rathee named Adaka who gave the necessary explanation. Having nothing more to learn from these masters, Phralaong said to himself,—“the knowledge I have thus acquired, is not sufficient to enable me to obtain the dignity of Budha”. Whereupon he resolved to devote himself to the Kamatan ⁴⁶ or meditation on the instability and nothingness of all that exists. To effectuate thoroughly his purpose, he repaired to the solitude of Oorouwesa where he devoted all his time to the deepest meditation. On a certain day it happened that five Rahans on their way to a certain place to get their food, arrived at the spot where Phralaong lived and had already spent six years. They soon become impressed with the idea that our hermit was to become a Budha. They resolved

* Continued from p. 520 vol. vi.

to stay with him and render him all the needful services, such as sweeping the place, cooking rice &c.

The time for the six years of meditation was nearly over, when Phralaong undertook a great fast,⁴⁷ which was carried to such a degree of abstemiousness that he scarcely allowed to himself the use of a grain of rice or Sesamum a-day, and finally denied himself even this feeble pittance. But the Nats who observed his excessive mortification, inserted Nat food through the pores of his skin. Whilst Phralaong was thus undergoing such severe fasting, his face that was of a beautiful gold color became black; the thirty-two marks indicative of his future dignity disappeared. On a certain day when he was walking in a much enfeebled state, on a sudden he felt an extreme weakness, similar to that caused by a dire starvation. Unable to stand up any longer, he fainted and fell on the ground. Among the Nats that were present, some said the Rahan-Gaudama is dead indeed; some others replied, he is not dead but has fainted from want of food. Those who believed he was dead, hastened to his father's palace to convey to him the sad message of his son's death. Thoodaudana enquired if his son died previous to his becoming a Budha. Having been answered in the affirmative, he refused to give credit to the words of the Nats. The reason of his doubting the accuracy of the report, was, that he had witnessed the great wonders prognosticating his future dignity that had happened in two circumstances when Phralaong, then an infant, was placed in the presence of a famous Rathee, and secondly, when he slept under the shade of the tree Tsampoo-thapia. The fainting being over, and Phralaong having recovered his senses, the same Nats went in all haste to Thoodaudana, to inform him of his son's happy recovery. "I knew well", said the king, "that my son could not die ere he had become a Budha". The fame of Phralaong having spent six years in a solitude, addicted to meditation and mortification, spread abroad like the sound of a great bell⁴⁸ hung in the vault of the skies.

Phralaong soon remarked that fasting and mortification were not works of sufficient value for obtaining the dignity of Budha; he took up his Patta and went to the neighbouring village to get his food. Having eaten it, he grew stronger; his beautiful face shone again like gold, and the thirty-two signs reappeared. The five Rahans that had lived with him, said to each other, "it is in vain that the Rahan-Gaudama has, during six years of mortification and sufferings, sought this dignity of Budha; he is now compelled to go out in search of food; assuredly if he is obliged to live on such food, when shall he ever become a Budha? He goes out in quest of food, verily he aims at enriching himself. As the man that wants drops of dew to refresh and wash his forehead, has to look for them, so we have to go somewhere else to learn the way to, and the merits of, Dzan which we have not been

able to obtain from him". Whereupon they left Phralaong, took up their Pattas and Hiwarans, went to a distance of eighteen youdzanas, and withdrew into the forest of Namigadawon.

At that time in the solitude of Oorouwesa there lived in a village a rich man named Thena. He had a daughter named Thoodzata. Having attained the years of puberty she repaired to a place where there was a Gnaong tree and made the following prayer to the Nat guardian of the place⁴⁹ "if I marry a husband that will prove a suitable match and the first fruit of our union be a male child, I will spend annually in deeds 100,000 pieces of silver and make an offering at this spot". Her prayer was heard and its object granted. When Phralaong had ended the six years of his fasting and mortification, on the day of the full moon of the month Katsong, Thoodzata was preparing to make her grateful offering to the Nat of the place. She had been keeping one thousand cows in a place abounding with sweet vines, the milk of those 1,000 cows was given to five hundred cows, these again fed with their own milk 250 cows, and so on in a diminutive proportion, until it happened that sixteen cows fed eight with their milk. So these eight cows gave a milk, rich, sweet and flavored beyond all description.

On the day of the full moon of Katsong,⁵⁰ Thoodzata rose at an early hour, to make ready her offering and disposed every thing that the cows should be simultaneously milked. When they were to be milked the young calves of their own accord kept at a distance, and as soon as the vessels were brought near, the milk began to flow in streams from the udders into those vessels. She took the milk and poured it into a large new caldron, set on the fire which she had herself kindled. The milk began to boil, bubbles formed on the surface of the liquid, turned on the right and sunk in, not a single drop being spilt out; no smoke rose from the fireplace. Four kings of Nats watched round, while the caldron was boiling; a great Brahma kept open an umbrella over it; a Thagia brought fuel and fed the fire. Other Nats by their supernatural power, infused honey into the milk, and communicated thereto a flavor such as is not to be found in the abode of men. On this occasion alone, and on the day Phralaong entered the state of Niban, the Nats infused honey into his food. Wondering at so many extraordinary signs she saw, Thoodzata called her female slave named Sounama, related to her all that she observed, and directed her to go to Gnaong tree and clear away the place where she intended to make her offering. The servant complying with her mistress' direction, soon arrived at the foot of the tree.

On that very night, Phralaong had had five dreams.⁵¹ 1st It appeared to him that the earth was his sleeping place, with the Kimawansa for his pillow. His right hand rested on the western ocean, his left hand on the eastern ocean, and his feet on the

southern ocean. 2nd. A kind of grass named Tyria appeared to grow out of his navel and reached to the skies. 3rd. Ants of a white appearance ascended from his feet to the knee and covered his legs. 4th. Birds of varied colour and size appeared to come from all directions and fall at his feet, when on a sudden they all appeared white. 5th. It seemed to him that he was walking on a mountain of filth, and passed over it without being in the least contaminated. Phralaong awaking from his sleep said to himself, after having reflected for a while on those five dreams, "to-day I shall certainly become a Budha". Thereupon he rose instantly, washed his hands and face, put on his dress and quietly waited day-break to go out in quest of his food. The moment being arrived to go out he took up his Patta and walked in the direction of the Gnaong tree. The whole tree was made brilliant by the rays which came forth from his person, and he rested there for a while. At that very moment arrived Sounama to clear, according to her mistress' orders, the place for her offering. At she approached, she saw Phralaong at the foot of the tree, the rays of light which beamed out of his person were reflected on the tree, which exhibited a most splendid and dazzling appearance. On observing this wonder, Sounama said to herself, of course the Nat has come down from the tree to receive the offering with his own hands. Overcome with an unutterable joy she immediately ran to her mistress and related her adventure. Thoodzata was delighted at this occurrence, and wishing to give a substantial proof of her gratitude for such good news, she said to Sounama—"from this moment you are no more my servant, I adopt you for my elder daughter". She gave her instantly all the ornaments suitable to her new position. It is customary with all the Phralaong to be provided, on the day they are to become Budha, with a gold cup of an immense value. Thoodzata ordered a golden vessel to be brought and poured therein the Nogano, or boiled mik. As the water glides from the leaf of the water lily without leaving thereon any trace, so the Nogano slid from the pot into the golden cup and filled it up. She covered this cup with another of the same precious metal and wrapped up the whole with a white cloth. She forthwith put on her finest dress, and, becomingly attired, she carried the golden cup over her head, and with a decent gravity, she walked towards the Gnaong tree. Overwhelmed with joy at seeing Phralaong, she reverentially advanced towards him, whom she mistook for a Nat. When near him, she placed gently the gold vessel on the ground and, in a gold bason, offered him scented water to wash his hands. At that moment the earthen Patta offered to Phralaong by the Brahma Gatikara disappeared. Perceiving that his Patta had disappeared, he stretched forth his right hand and washed it in the scented water, at the same time Thoodzata presented to him the golden cup containing the Nogano. Having observed that she had

been seen by Phralaong, she said to him,—“ my Lord Nat, I beg to offer you this food together with the vase that contains it.” Having respectfully bowed down to him, she continued,—“ may your joy and happiness be as great as mine, may you rest in the happiest rest, ever surrounded by a great and brilliant retinue”. Making offering of the gold cup worth 100,000 pieces of silver, with the same disinterestedness as if she had given over but the dry leaf of a tree, she withdrew and returned to her home.

Phralaong rising up took with himself his golden cup, and having turned on the left of the Gnaong tree he went on the banks of the river Neritzara, where more than 100,000 Budhas had bathed ere they obtained the supreme intelligence. On the banks of that river is a bathing place. Having left on that spot his golden cup, he undressed himself, and leaped into the river. Having done, he came out and put on his Hiwaran that had been used according to the invariable custom of his predecessors. He sat down having his face turned towards the east; his face resembled in appearance a well ripe palm fruit—he divided his exquisite food into forty nine mouthfuls, which he ate all without mixing any water with it. During the forty nine days he spent round the Bandi tree, he never bathed, nor took any food, nor experienced the least want, nor any change in his countenance, but he spent his whole of his time absorbed as it were in an uninterrupted meditation. Holding up in his hands the empty golden vessel he said, “ if on this day I am to become a Budha, let this cup float on water and ascend the stream”—whereupon he flung it in the water, when gliding towards the middle of the river, and then beating up the stream, it ascended it with the swiftness of a horse to the distance of eighty cubits, then it sunk into a whirlpool, went down to the country of Naga, and made a noise when striking against the three vessels of the three last Budhas, viz. Kankathan, Gaunagong and Kathaba. On hearing this unusual noise, the chief of Nagas awoke from his sleep and said. “ How is this? yesterday, there was a Budha, and to-day again there is another”; and in more than one hundred stanzas he sung praises to Budha.

CHAPTER 7TH.

On the banks of the river Neritzara, there was a grove of Ingiing trees, whither Phralaong repaired to spend the day under their cooling shade and in the evening he rose up and walked with the dignified and noble bearing of a lion, in a road eight Oothaba wide, made by the Nats and strewed with flowers, towards the Gnaong tree. The Nats, Nagas and Galongs joined in singing praises to him, playing instruments, and making presents of the finest flowers and most exquisite perfumes, brought from their own seats. The same rejoicings took place in ten thousand other worlds. Whilst on his way towards the tree he met with a

young man just returning with a grass load he had cut in the fields. Foreseeing that Phralaong might require some for his use, he presented him an offering of eight handfuls of grass, which were willingly accepted.

Arrived close to the Gnaong tree, ⁵² Phralaong stopped at the south of the tree, the face turned towards the north, when on a sudden the southern point of the globes seemed to lower down to the hell Awidzi, the lowest of all, whilst the northern one appeared to reach the sky. Then he said "verily this is not the place where I shall become a Budha". Thence Phralaong went on his right side towards the east of the tree, and standing up, the face turned towards the west, he said, "this is indeed the place where all the preceding Budhas have obtained the supreme intelligence. Here too is the unslaked spot, whereupon I shall become a Budha, and set up my throne." He took by one of their extremities the eight handful of grass, shook them on the ground, when on a sudden there appeared emerging as it were from the bottom of the earth, a throne fourteen cubits high, adorned with the choicest sculptures and paintings superior in perfection to all that art could produce. Phralaong then facing the east, uttered the following imprecation, "if I am not destined to become a Budha, may my bones, veins and skin remain on this throne, and my blood and flesh be dried up". He then ascended the throne, with his back turned against the tree and his face towards the east. He sat down, in a cross-legged position, firmly resolved never to vacate the throne, ere he had become a Budha. Such firmness of purpose, which the combined elements could not shake for a moment, no one ought to think of ever becoming possessed with.

Whilst Phralaong was sitting on the throne in that cross-legged position, Manh Nat said to himself, "I will not suffer Prince Thcidat to overstep the boundaries of my empire". He prepared to assemble all his warriors and shouted aloud to them. On hearing their chief's voice, the warriors gathered thick round his person. His countless followers in front, on his right and on his left, reached to the distance of eighteen Youdzanas and above him to that of nine only. Behind him, they extended to the very limus of the world. The cries of that immense multitude was re-echoed at a distance of 10,000 Youdzanas, and resembled the roaring of the mighty sea. Manh Nat rode the elephant Girimegala measuring in length 150 Youdzanas. Supplied with one thousand right arms, he wielded all sorts of the most deadly weapons. His countless warriors to avoid confusion were all disposed in ranks,—bearing their respective armour, like immense clouds they advanced towards Phralaong.

At that time Nats surrounded Phralaong, singing praises to him; the chief of Thagias was playing on his conque, whereof a single blowing in resounded for four months; the chief Naga was

uttering stanzas in his honor, a chief Brahma held over him the white umbrella. On the approach of Manh Nat's army, they were all seized with an uncontrolled fear, and fled to their respective places. The Naga dived in the bottom of the earth at a depth of 500 Youdzanas, and covering his face with his two hands, fell into a deep sleep. The Thagia swinging his conque upon his shoulders, ran to the extremity of the world. The Brahma holding still the umbrella by the extremity of the handle, went to his own country; Phralaong was therefore left alone. Manh Nat turning to his followers cried to them, "there is, indeed, no one equal to the Prince Theiddat, let us not attack him in front, but let us assail him on the north side."

On that moment Phralaong lifting his eyes, looked on his right, left and in front, for the crowd of Nats, Brahmas and Thagias, that were paying him their respects. But they had all disappeared. He saw the army of Manh Nat coming thick upon him from the north like the mighty storm, "what! said he, is it against me alone that such a crowd has been assembled, I have no one here to help me, no father, no brothers, no sisters, no friends and no relatives. But I have with me the ten great virtues which I have practised, these are my offensive and defensive weapons, and with them I will crush down the great army of Manh". Whereupon he quietly remained meditating upon the merits of the ten great virtues.

Whilst Phralaong was thus absorbed in meditation, Manh Nat began his attack upon him. He caused a wind to blow with such an extraordinary violence, that it brought down the tops of mountains, though they were one or two Youdzanas thick. The trees of the forests were shattered to atoms. But the virtue of Phralaong's merits preserved him from the destructive storm. His Hiwaran itself was not agitated. Perceiving that his first effort was useless, Manh caused a heavy rain to fall with such violence, that it tore the earth, and opened it to its very bottom. But not even a single drop touched Phralaong. To this succeeded a shower of rocks, accompanied with smoke and fire; but they were changed into immense masses of flowers, which dropped at his feet. There came afterwards another shower of swords, knives and every cutting weapon, emitting smoke and fire. They all fell powerless at the feet of Phralaong. A storm of burning ashes and sand soon darkened the atmosphere, but they fell at his feet like fragrant dust. Clouds of mud succeeded, which fell like perfumery all round over Phralaong. Manh caused a thick darkness to fill the atmosphere, but to Phralaong it emitted rays of the purest light. Seeing all his gigantic efforts attended with no result, Manh enraged, cried to his followers: "why do you stand looking on? rush at once upon him and compel him to flee before me". Sitting on his huge Elephant and brandishing his formidable weapon, Manh approached close to

Phralaong and said to him, "Theiddat, this throne is not made for you; vacate it forthwith—it is my property". Phralaong calmly answered—"you have not as yet practised the 10 great virtues, nor gone through the 5 acts of self-denial, you have never devoted your life to help others, to acquire merits, in a word you have not yet done all the needful to enable you to obtain the supreme dignity of Phra. This throne therefore cannot be yours". Unable to control any longer his passion, Manh threw his formidable weapons at Phralaong; but they were converted into garlands of beautiful flowers that adapted themselves gracefully round Phralaong's neck. His sword and other cutting weapons, that could cut at once through the hardest rocks, were employed with no better success. The soldiers of Manh hoping that their united efforts should have a better result, and that they could thrust Phralaong from his throne, made a sudden and simultaneous rush at him, rolling against him with an irresistible force a huge rock as large as a mountain; but by the virtues of their opponent's merits, it was converted into a fine nosegay that gently dropped at his feet.

At that time, the Nats from their seats looked down on the scene of the combat, suspended between hope and peace. Phralaong at that moment said to Manh, "how do you dare to pretend to the possession of this throne? could you ever prove by undisputable evidence that you have ever made offerings enough to be deserving of this throne?" Manh turning to his followers answered: "here are my witnesses, they all will bear evidence in my favor". At the same moment they all shouted aloud to testify their approval of Manh's words. "As to you Prince Theiddat, where are the witnesses that will make a deposition in your favor and prove the justness of your claim to the possession of this throne". Phralaong replied, "my witnesses are not like yours, men or any living beings."⁵³ The earth itself will bear testimony to me. For without mentioning even those offerings I have made during several previous existences, I will but mention the forty seven great ones I made whilst I lived as Prince Wethandra". Stretching out his right hand, which he had hitherto kept under the folds of his garment, and pointing to the earth he said with a firm voice—"Earth, is it not true that at the time I was Prince Wethandra, I made forty-nine great offerings"? The earth replied with a deep and loud roaring, resounding in the midst of Manh's legions, like the sound of countless voices threatening to spread death and destruction in their ranks. The famous charger of Manh bent his knees and paid homage to Phralaong. Manh himself disheartened and discomfited fled to the country of Watha-watti. His followers were so overpowered by fear that they flung away all that could impede their retreat, and ran away in every direction. Such was the confusion and

disorder that prevailed, that two warriors could not be seen following the same course in their flight.

Looking from their seats on the defeat of Manh and the glorious victory of Phralaong, the Nats⁵⁴ rent the air with shouts of exultation. The Brahmas, Nagas and Galongs joined the Nats in celebrating his triumph over his enemies. They all hastened from more than ten thousand worlds to pay their respects and offer their felicitations, presenting him with flowers and perfumes, saying, "Victory and glory to Phralaong! Shame and defeat to the infamous Manh!"

It was a little while before sun-set that Phralaong had achieved his splendid victory over his proud foe. At that time, he was wrapped up, as it were, in the profoundest meditation. The extremities of the branches of the Bandi tree,⁵⁵ fell gently over and by their undulations seemed caressing, as it were, his Hiwarau—and resembling so many beautiful nosegays of red flowers that were offered to him. At the first watch of the night, Phralaong recollected what he had been during his former existences and obtained the knowledge of the past, at midnight he was gifted with a sight similar to that of a Nat, and obtained the knowledge of the present, on the morning he obtained a perfect knowledge of the law, of all beings and of all relations subsisting among them, that is to say, perfect wisdom.

When this great wonder took place ten thousand worlds were shaken twelve times; when the supreme knowledge was imparted to him, these words "most excellent man", were heard throughout the same series of systems. Magnificent ornaments decorated all places. Flagstaffs appeared in every directions with splendid streamers. Of such dimensions were they that the extremities of those in the east reached the opposite side of the west, and those in the north, the southern boundary. Some flags hanging from the seats of Brahmas, reached the surface of the earth. All the trees of ten thousand worlds shot out branches loaded with fruits and flowers. The five sorts of lilies bloomed spontaneously. From the cliffs of rocks beautiful flowers sprung out. The whole universe appeared like an immense garden covered with flowers, a vivid light illuminated those hills, the darkness of which could not be dispersed by the united rays of seven suns. The water which fills the immense cavern at a depth of eighty-four thousand Youdzanas became fresh and offered a most agreeable drink. Rivers suspended their course, the blind recovered their sight, the born deaf could hear, and the lame were able to walk freely. The captives were freed from their chains and restored to liberty. Innumerable other wonders took place at the moment Phralaong received the supreme intelligence. He said then to himself—"Previous to my obtaining the supreme knowledge, I have, during countless existences, moved in the circle of ever renewed existences and borne up misery. Now I see this distinctly. Again I perceive

how I can get out of that prison of existence, and through the edifice of all miseries and wretchedness; my will is fixed on the most amiable state of Nibban. I have now arrived at that state of perfection that excludes all passions".

It was at the full moon of the month Katsong that those memorable occurrences took place, and it was day-light when Phralaong had at last obtained the full dignity of Budha. From that moment, during seven consecutive days, he remained sitting on his throne, overshadowed by the Bandi tree, and absorbed in a deep meditation. Many Nats seeing him in this long continued meditation, thought that something else was still wanting towards his obtaining the perfect nature of Budha. On the eighth day, desiring to put an end to their incredulous thoughts, he raised himself up in the air⁵⁶ and in their presence wrought many thousand wonders which put at once an end to all their doubts.

He then descended from his throne, and went towards the north, at a distance of twenty cubits. There he stood, keeping his eyes fixed on his throne, and in this erect posture, he spent seven other days absorbed in a deep meditation. Between that place and his throne he kept up walking to and fro during seven days in a state of uninterrupted meditation. The Nats had erected for him at the west of the tree a splendid palace adorned with precious stones. Thither Budha repaired and remained again during an equal period of seven days, sitting in a cross legged position, and meditating on the seven divisions of Abidama. He had meditated over the six first books, and the six glories had not yet come out of his person.

It was but after having mastered the contents of the last division, named Pathan, divided into twenty four books, that these glories appeared. Like the great fishes that delight to sport but in the great ocean, the mind of Budha expanded itself with undescribable eagerness and delighted to run unrestrained through the unbounded field opened before him by the contents of that volume. Brown rays issued from his hairs, beard, and eyelids. Gold-like rays shot forth from his eyes and skin, from his flesh and blood dashed out purple rays, and from his teeth and bones escaped rays white like leaves of the lily, from his hands and feet emanated rays of deep red color which falling on the surrounding objects made them appear like so many rubies of the purest water. His forehead emitted undulative rays resembling those reflected by cut crystal. The objects which received those rays, appeared as mirrors, reflecting the rays of the sun. Those six rays of various hues caused the earth to resemble a globe of the finest gold. Those rays at first penetrated through our globe which is 82,000 Yondzanas thick, and thence illuminated the mass of water which supports our globe. It resembled a sea of gold. That body of water though 480,000 Yondzanas thick, could not stop the elastic projection of those rays, which went forth through a stratum of air

960,000 Yondzanas thick, and were lost in the vacuum. Some rays following a vertical direction, rushed through the six seats of Nats, the 160 Brahmas and the four superior ones and thence were lost in vacuum. Other rays following an horizontal direction, penetrated through an infinite series of worlds. The sun, the moon, the stars, appeared like opaque bodies deprived of light. The famous garden of Nats, their palace, the ornaments hanging from the tree Padetha were all cast into the shade and appeared obscure as if wrapped up in complete darkness. The body of the chief Brahma, which shoots forth light through one million of systems, emitted the feeble and uncertain light of the glowworm at sun-rise. This marvellous light emanating from the person of Budha, was not the result of vowing or praying: but all the constituent parts of his body became purified to such an extent by the sublime meditation of the most excellent law, that they shone with a matchless brilliancy.

Having thus spent seven days in that place close to the Bandi tree, he repaired to the foot of another Gnaong tree called Eatzapala, at a distance of 44 tas (1 tas=7 cubits), on the east of the Bandi. Here he sat in a cross-legged position during seven days enjoying the sweetness of self-recollection. It was near to that place that the vile Manh, who since his great attack on Budha had never lost sight of him, but had always secretly followed him with a wicked spirit, was compelled to confess that he had not been able to discover in that Rahan anything blameable and expressed his fear of seeing him alone pass over the boundaries of his empire. He stooped in the middle of the highway, and across it drew successively 16 lines as he went on reflecting on sixteen different subjects. When he had thought over each of the 10 great virtues he drew first ten lines, saying "This Rahan has indeed practised to a high degree those ten virtues. I cannot presume to compare myself to him." In drawing the 11th, he confessed that he had not, like that Rahan, the science to know the inclinations and dispositions of all beings. In drawing the 12th, he said that he had not as yet acquired the knowledge of all that concerns the nature of the various beings. Drawing the 4 remaining lines, he confessed successively that he did not feel, like that Rahan, a keen compassion for the beings yet entangled in the miseries of existence, nor could he perform miracles nor perceive everything, nor attain to the perfect and supreme knowledge of the law. On all these subjects, he avowed his decided inferiority to the great Rahan.

Whilst Manh was thus engaged with a sad heart in meditating over those rather humiliating points, he was at last observed by his three daughters Takna,⁵⁷ Aratee and Raga, who had been for sometime looking after him. When they saw their father with a cast down countenance they came to him, and enquired about the motive of his deep affliction. "Beloved daughters, replied Manh, I see this Rahan escaping my dominion and

notwithstanding my searching examination, I have not been able to detect in him anything reprehensible. This is the only cause of my inexpressible affliction." "Dear father, replied they, banish every sorrow from your mind, and be of a good heart—we will very soon have found out the weak side of the great Rahan, and brought him back within the hitherto unpassed limits of your empire." "Beware of the man you will have to deal with. I believe no effort, however great, directed against him shall ever be rewarded with success. He is of a firm mind and unshaken purpose. I fear you shall never succeed in bringing him back within my dominions". "Dear father, said they, we women know how to manage such affairs, we will catch him like a bird, in the net of concupiscence,—let fear and anxiety be for ever dispelled from your heart." Having given this assurance, for they went to Budha and said to him "illustrious Rahan, we approach you respectfully and express the wish of staying with you, that we might minister to all your wants." Without heeding in the least their words nor even casting a glance of them, the most excellent Budha remained unmoved, enjoying the happiness of meditation. Knowing that the same appearance, face and countenance may not please every one they assumed the one the appearance of a heart winning young girl, the other that of a bloomful virgin, and the third that of a fine middle aged beauty. Having thus made their arrangements, they approached Budha and several times expressed to him the desire of staying with him and ministering to all his wants. Unmoved by all their allurements, Budha said to them, "for what purpose do you come to me? You might have some chance of success with those that have not as yet extinguished in them and rooted up from their heart the various passions, but I, like all the Budhas, my predecessors, I have destroyed in me, concupiscence, passion and ignorance. No effort on your part will ever be able to bring me back in the world of passions. I am free from all passions, and have obtained supreme wisdom. By what possible means could you ever succeed in bringing me back into the whirlpool of passions"? The three daughters of Manhi, covered with confusion, yet overawed with admiration and astonishment said to each other,—“our father forsooth had given us a good and wise warning. This great Rahan deserves the praises of men and Nats. Every thing in him is perfect, to him it belongs to instruct men in all things they want to know.” Saying this they with cast-down countenance returned to their father.

At that time a certain Pounha who was habitually falling into fits of great passion, approached, without been perceived, close to the most excellent Budha. Having entered into conversation with him and heard many instructions worthy of being ever remembered ⁵⁸ he said to Budha;—"Lord Gaudama, what are the practices one has to observe that he might attain to the perfection of Brahma"? Budha who knew all that relates to the laws of Brah-

mas, answered, "a Rahan who does no wrong outwardly, who does not get angry, who is free from concupiscence who is attentive to the prescribed duties and follows the four ways of perfection, he is sure to reach the state of Niban". Having remained seven days in that position, and arising from ecstasy Budha went to the south eastern direction of the Bandi tree. On that spot there was a tank called Hidza lee-dana. On the bank of that tank he sat under the shade of the Kiin tree, in a cross-legged position, during seven days, enjoying the pleasure of meditation. During those seven days, rain fell in abundance, and it was very cold. A Naga chief of this tank could have made a building to protect Budha against the inclemency of the weather, but he preferred, for gaining greater merits, to coil himself up in seven folds round his person, and above him placed his head with his two large wings extended. When the seven days were over and the rain had ceased, Naga quitted his position—then assuming the appearance of a young man, he prostrated before Budha and worshipped him. Budha said he who aims at obtaining the state of Niban ought to possess the knowledge of the four roads leading thereto, as well as of the four great truths, and of all laws. He ought bear no anger towards other men, nor harm them in any way soever. Happy he who receives such instructions.

After these seven days Budha went to the west of the Bandi tree and sat in a cross-legged position at the foot of the tree Ling-loon, engaged during seven days in the sweet exercise of contemplation. At the end of those seven days, at day-break, Budha felt the want of taking some food. This having been remarked by a Thagia, he presented him some *she-sha* fruit which he ate and brought him some water to wash his face and hands.

At that time two brothers named Tapoosa and Palekat, merchants by profession, were going with their carts from the village of Ookala to the country of Mitzina where Phra was then residing. A Nat who had been formerly their relative, stopped, by his power, the carriage wheels. Surprised at such a wonder, the merchants prayed to the Nat, guardian of that place. The Nat assuming a visible shape, appeared before them and said to them—"The illustrious Budha who, by the knowledge of the four great truths, has arrived to the nature of Phra, is now sitting at the foot of the Lin-loon tree; go now to that place, and offer him some sweet bread and honey, you shall derive therefrom great merits for many days and nights to come". The two brothers joyfully complying with the Nat's request, prepared the sweet bread and honey, and hastened in the direction that had been indicated them. Having placed themselves in a suitable position and prostrated before Budha, they said "most glorious Phra, please to accept these offerings; great merits, doubtless, will be our reward for many days to come". Budha had no Patta to put those offerings in, the one he had received from the Brahma Gatigara had

disappeared, when Toodzata made him her great offerings. Whilst he was thinking on what he had to do, four Nats came and presented him, each with one Patta, made of nila stone. Phra accepted of the four Pattas, not from motives of covetousness but to let each Nat have an equal share in such meritorious work. He put the four Pattas one in the other, and by the power of his will they, on a sudden, became but one Patta, so that each Nat lost nothing of the merit of his offerings. Budha received the offerings of the two merchants in that Patta and satisfied his appetite. The two brothers said to Budha, "we have on this day approached you, worshipped you and respectfully listened to your instructions—please to consider us as your devoted followers, for the remainder of our life." ⁵⁹ They obtained the position of Oopathaka. They continued addressing Budha and said; "what shall we henceforth worship"; Budha rubbing his hand over his head gave them a few of his hairs that had adhered to his fingers bidding them to keep them carefully. The two brothers, overjoyed at such a valuable present, received them respectfully, prostrated before Budha and departed.

CHAPTER 8TH.

Having come to the end of his great meditations,⁶⁰ Budha left this place and returned to the place called Adzapala where he revolved the following subjects in his mind. The knowledge, said he, of the law and of the four great truths which I alone possess is very hard to be had. The law is deep, difficult to find out, very sublime and to be known but by the means of earnest meditation. It is sweet, filling the soul with joy and accessible but to the wise. Now all beings are sunk under the influence of the five great passions, they cannot free themselves from their actions and that is the source of all mutability. But the law of mutability is the opposite of the law of Niban or rest. This law is hard to be understood. If I ever preach that law, beings will not be able to understand me, and from my preaching there will result but a useless fatigue and weariness to me. Budha thus remained almost disinclined to preach the law. The great Brahma observing what was taking place in Budha's soul cried out, "alas! all mankind is doomed to be lost. He who deserves to be worshipped by all beings feels no disposition to announce the law". He instantly left his seat and having repaired to the presence of Phra, his cloak over his shoulder with one extremity hanging backward, he bent his knee, lifted up his joined hands to his forehead before the Sage and said to him, "most illustrious Budha, who is adorned with the six glories, do condescend to preach the most excellent law; the number of those buried under the weight and filth of passions is comparatively small, if they do not listen to the law, there will be no great loss. But there will be an immense number of beings, who will understand the

law. In this world there are beings who are given up to the gratification of sensual appetites; but there are also a great many who are following heretical opinions to whom the knowledge of truth is necessary, and who will easily come to it. Lay now open the way that leads to the perfection of Ariahs, these perfections are the gates to Neiban". Thus he entreated Budha. This Brahma had been in the time of the Budha Kathaba, a Rahan under the name of Thubaka and was transferred to the first seat of Brahma for the duration of a world.

On hearing the supplications of that Brahma, Budha began to feel a tender compassion for all beings. With the keen eyes of a Budha, he glanced over the whole world. He discovered distinctly those beings who were as yet completely sunk into the filth of passions; those who were but partly under the control of passions; those whose dispositions appeared to be very imperfect, and those whose dispositions seemed to be more promising. He then made to the chief of Brahmas the solemn promise that he would preach his law to all beings. Satisfied with the answer he had received, the chief rose up, withdrew respectfully at a proper distance and turning on the right, left the presence of Budha and returned to his own seat.

Another thought pre-occupied the mind of Budha. To whom said he, shall I announce the law; having pondered awhile over this subject, he added, the Rathee Alara of the Kalama race is gifted with wisdom and an uncommonly penetrating mind; passions have scarcely any influence over him. I will first preach to him the most excellent law. A Nat said then to Phra that Alara had died seven days ago. Budha to whom the past is known, had already seen that Alara was dead. He said, great, indeed is the loss Alara has met with, he would have doubtless been able to understand rightly well the law I intended to preach to him. To whom shall I go now? Having paused awhile he added, the Rathee Oodaka, son of Prince Rama, has a quick perception, he will easily understand my doctrine; to him I will announce the law. But the same Nat told him that Oodaka had died the night before last, at midnight. Oh! great is the loss that has come upon Oodaka; he would have easily acquired the knowledge of the perfect law. Budha considered a third time, and said to himself, to whom shall I to the preach the law? After a moment's delay, he added; many are the services I received in the wilderness from the five Rahans who lived with me.⁶¹ I will repay their good offices to me, by preaching to them the law but where are they now? His penetrating regards soon discovered them in the solitude of Migadawon. Having enjoyed himself in the place of Adzapala, he went on towards the country of Baranathe.—Midway between the tree Bandi and the place of Yauthitha, he was seen by a certain heretic named Upaka. From the Bandi tree to Yauthitha, the distance is three gawots (nine

miles) and from the same tree to the country of Baranathe the distance is 18 Youdzanas. All the former Budhas travelled that distance through the air, but our Budha, who had merciful designs over Upaka went on foot. Upaka became afterwards a Rahan, and obtained the state of Anagan. Upaka said to him, "O Rahan, all in your exterior bespeaks the most amiable qualities, your countenance is at once modest and beautiful. Under what teacher have you become a Rahan? and to what law or doctrine have you given preference in your arduous studies?" Budha answered, "Upaka, I have triumphed over all the laws of mutability, I am acquainted with all the laws that rule this universe, and the beings existing therein; from concupiscence and other passions, I am wholly disengaged. I have no teacher, and among Nats and men, there is none equal to me. Because of my victory in the laws of demerits, I have been named Zeena. Now I am proceeding to the country of Baranathe, for the sake of preaching law". Upaka replied, "you are certainly the illustrious Gaudama." He shook then his head, turned away from the road, and went to the village of Wingaha. Budha continued his way towards Baranathe and soon reached the solitude of Migadawon, little distant from Baranathe, and went to the place where lived the five unbelieving Rahans. When they saw him coming at a distance, they said to each other the Rahan Gaudama is in search after disciples, he has just performed penitential deeds and he is looking out for getting alms and clothes. Let us pay no respect to him in the way of going out to meet him, of receiving the Hiwaran from his hands, of presenting him water to wash his feet and preparing a place to sit on; let him sit wherever he pleases. Such was the plan they were concerting among themselves. But when Budha drew near they could adhere no longer to their resolution. They rose up, went out to welcome his arrival. One took the Hiwaran from his hands, another the Patta, a third one brought water for the washing of the feet and a fourth one prepared a becoming place of rest. Budha sat in the place that had been prepared for him. The five unbelieving Rahans gave him the title of venerable Budha. "Do not call me," said Budha sneeringly "by the name of venerable Budha. Though I know the four great laws and am coming like all other Budhas from the days of Weepathi, down to this time, do not give me such a title." Then continuing to address them, he said: "O Rahans listen to me, I will preach you the most perfect law. Whoever listens to my instructions, he will soon reach the acme of perfection—he will leave the society of men, to embrace the profession, and having walked through the path of perfection, he will arrive to the state of Niban." The five Rahans then believed firmly he was really a Budha. From that moment they entered in the four ways leading to the four great perfections.

The Nats guardians of the country of Baranathi ⁶² and Miga-

dawon hearing the sublime instructions delivered by Budha on this occasion, cried aloud; "the law which the most excellent Budha preaches, is such as no man, Pounha or Brahma can teach". Their united voices were heard in the lowest seat of Nats: the inhabitants of that seat catching their words, repeated them and they were heard by those of the next seat, and so on until they reached the seats of Brahmas, and were re-echoed through 10,000 worlds. A mighty commotion was felt all over those worlds.

The five at first unbelieving Rahans obtained the perfection of Thoutapotsi. Budha often repeated to them; "come ye to me, I preach a doctrine which leads to the deliverance from all the miseries attending existence". On that day, being the full moon of Watso, eighteen Koodes (180,000,000) of Nats and Brahmas who had heard his preachings, obtained their deliverance. The conversion of those five Rahans, exhibited to their world the splendid and wonderful sight of six Rahandas assembled in the same place.

CHAPTER 9TH.

At that time there was in the country of Baranathe the son of a rich man, named Ratho. He was of very gentle and amiable dispositions. His father had built for him three palaces for each season of the year. A crowd of young damsels, skilful in the art of playing all sorts of musical instruments, attended him in each of those palaces. Ratho spent his time in the midst of pleasure and amusements. On a certain day, while surrounded with female dancers and singers, he fell into a deep sleep. The musicians following his example, laid aside their instruments and fell asleep too. The lamps, filled with oil, continued to pour a flood of light throughout the apartments. Awaking sooner than usual, Ratho saw the musicians all asleep round him in various and unseemly situations. Some slept with a wide opened mouth; some had dishevelled hair; some were snoring aloud, some had their instruments laying on themselves, others by their side. The whole exhibited a vast scene of the greatest confusion and disorder. Sitting on his couch in a cross-legged position, the young man silently gazed with amazement and disgust, over the unseemly spectacle displayed before him; then he said to himself: "the nature and condition of the body constitute indeed a truly heavy burden; it is something that affords a great deal of trouble and affliction." Whereupon he instantly arose from his couch, put on his gilt slippers and came down to the door of his apartment. The Nats who kept a vigilant watch, lest any one should oppose him in the execution of his holy purposes, kept open the door of the house, as well as the gate of the city. Ratho directed his steps towards the solitude of Migadawon. At that time Budha, who had left at a very early hour his sleeping place, was walking in front of the house. He saw at a distance a young man coming in the direction of the house.

He stopped instantly his pacing, and going into his own apartment, he sat as usual on his seat, awaiting the arrival of the young stranger, who soon made his appearance and stated modestly the object of his visit. Budha said to him, "O! Ratho the law of Niban is the only true one: alone it is never attended with misery and affliction. O! Ratho come nearer to me, remain in this place, to you I will make known the most perfect and valuable law." On hearing these kind and inviting expressions Ratho felt his heart overflowed with the purest joy. He instantly put off his slippers, drew nearer to Budha, bowed down three times before him, withdrew then to a becoming distance and remained in a respectful attitude. Budha began to preach the law, unfolding successively the various merits obtained by almsgiving, a strict performance of all duties and practices of the law, and above all by renouncing the pleasures of this world. During all the while the heart of the young visitor expanded in a wonderful manner: he felt the ties that hitherto had bound him, as it were, to the world, gradually relaxing and giving way before the unresisting influence of Budha's words. The good dispositions of the young hearer were soon remarked by Budha, who went on explaining all that related to the miseries attending existence, the passions tyrannising the soul, the means wherewith to become exempt from those passions, and the great ways leading to perfection. After having listened to that series of instructions, Ratho, like a white cloth that easily retains the impressions of various colors printed upon it, felt himself freed from all passions, reached at once the state of Thoutopatsi.

Ratho's mother, not meeting with her son early, as usual, went up to his apartment, and to her great surprise found him not, moreover she observed unmistakeable marks of his sudden and unexpected departure. She ran forthwith to her husband, and announced to him the sad tidings. On hearing of such an unlooked for event, the father sent messengers in the direction of the four points of the compass, with positive orders to search incessantly after his son, and leave no means of inquiry untried. As regarded himself he resolved to go to the solitude of Migadawon in the hope of finding out some advice of his son's escape. He had scarce travelled over a certain distance, when he remarked on the ground the marks of his son's footsteps. He followed them up and soon came in sight of Budha's resting place. Ratho was at that time listening with the deepest attention to all the words of his great teacher. But by the power of Budha, he remained hidden from the eyes of his father, who came up and having paid his respects to Gaudama, eagerly asked him if he had not seen his son. Gaudama bade him to sit down and rest from the fatigue of his journey. Meanwhile he assured him that soon he would see his son. Rejoiced at such an assurance Ratho's

father complied with the invitation he had received. Budha announced his law to this distinguished hearer and soon led him to the perfection of Thoutopatsi. Filled with joy and gratitude, the new convert exclaimed "O illustrious Phra, your doctrine is a most excellent one; when you preach it, you do like him who replaces on its basis an upset cup; like him too who brings to light precious things which have hitherto remained in darkness, who paints the way to those that had lost it, who kindles a brilliant light in the middle of utter darkness; who open the mind's eyes that they might see the pure truth. Henceforth I adhere to you and to your holy law, please to reckon me as one of your disciples and supporters". This was the first layman that became a disciple of Gaudama.

Whilst Budha was busily engaged in imparting instruction to Ratho's father, the young man had entered on a deep and solemn meditation over some of the highest maxims he had heard from his great teacher. He was calmly surveying, as it were, all the things of this world, but he felt there was in himself no affection whatever for any thing. He had not yet become a Rahan, nor put on the Rahan's dress. Phra who watched over all the movements of his pupil's mind, concluded from his present dispositions that there could be no fear of his ever returning into the world of passions. He suddenly caused by his mighty power, the son to become visible to his father's eyes. The father perceiving on a sudden his son sitting close by him, said "beloved son, your mother is now bathed in tears, and almost sinking under the weight of affliction caused by your sudden departure; come now to her, and by your presence restore her to life, and infuse into her desolated soul some consolation". Ratho calm and unmoved made no reply, but cast a look at his Master. Budha, addressing Ratho's father said to him, "what will you have to state in reply to what I am about to tell you? you son knows what you know, he sees what you see, his heart is entirely disentangled from all attachment to worldly objects, passions are dead in him. Who will now over presume to say that he ought to subject himself again to them and bend his neck under their baneful influence". "I have spoken rashly" replied the father: "let my son continue to enjoy the favor of your society, let him remain with you for ever and become your disciple. The only favor I request for myself is to have the satisfaction of receiving you in my house with my son attending you, and there to enjoy the happiness of supplying you with your food." Budha by his silence assented to his request. No sooner had his father departed, but Ratho applied for the dignity of Rahan which was forthwith conferred upon him. At that time, there were in the world six Rahandas.

NOTES.

45. The word Rathee means an ascetic or hermit. The fact of Budha placing himself under the tuition of two masters or teachers leading an ascetic life, to learn from them notions of the most abstruse nature, establishes beyond all doubt the high antiquity of the existence in India of a large number of individuals, who living in some retired spot, far from the tumult of society, endeavoured by constant application to study and meditation, to dive into the deepest recesses of morals and metaphysics. The fame of the learning of many among them, attracted to their solitude crowds of disciples, anxious to study under such eminent masters. Hence we see some of those Rathees at the head of four or five hundred disciples. There is no doubt but the most distinguished Rathees became the founders of many of those philosophico-religious schools for which India was renowned from the remotest antiquity. Like many others who thirsted for knowledge Phralaong resorted to the Schools of the Rathees, as to the then most celebrated seats of learning.

From this fact we may be allowed to draw another inference, which may be considered as a consequence of what has been stated in a foregoing note, regarding the superior antiquity of Brahminism over Buddhism. Phralaong was brought up in the bosom of a society regulated and governed by Brahminical institutions. He must have been imbued from the earliest days of his elementary education with the notions generally taught, viz the Brahminical ones. When he grew up and began to think for himself, he was displeased with certain doctrines which did not tally with his own ideas. Following the example of many that had preceded him in the way of innovation, he boldly shaped his course in a new direction, and soon arrived at a final issue on many points, both with his teachers, and some of the doctrines generally received in the society in which he had been brought up. We may therefore safely conclude that the doctrines supposed to have been preached by the latest Budha, are but an off-shoot of Brahminism. These may serve to account for the great resemblance subsisting between many doctrines of both creeds. The cardinal points on which these two systems essentially differ are the beginning and the end of living beings. Between these two extremes, there is a multitude of points over which both systems so perfectly agree, that they appear blended together.

I have nowhere found details regarding these Rathees and their mode of living. From what is said of them in this work, it may be asserted with positive evidence that these pious personages withdrew from the world, and retired into lonely places far from the gaze of man. Some of them lived in community under the guidance and direction of some eminent teachers. Others, preferring a more independent mode of life, remained alone in some secluded spot, to enjoy more freely the sweets of meditation and contemplation; sometimes a few zealous sallied from their retreat, urged by a desire to be useful to their fellow creatures, and preached the doctrines they had elaborated in the midst of silence and solitude. They were supported by the alms bestowed on them by their disciples and the admirers of their singular mode of life. They were courted and esteemed by the world in proportion to the contempt they appeared to hold it in. Denying to themselves the pleasures which were opposed to their austere life, they observed, as long as they remained Rathees, the rules of the strictest celibacy.

Phralaong preparing himself for his future high calling, began to study the science of Dzane under distinguished masters. What is meant by Dzane? This Pali word means thought, reflection, meditation. It is often designed by the Burmese to mean a peculiar state of the soul that has already made great progress in the way of perfection. Phralaong intended, by placing himself under the direction of those eminent teachers, to learn the great art of training his mind for obtaining, by constant and well directed meditations, high mental attainments. In the book of Buddhist Metaphysics I have found the science of Dzane divided into five parts or rather five steps, which the mind has to ascend successively, ere it can enjoy a state of perfect quiescence, the highest point a perfected being can attain to before reaching the state of Niban. The 1st state when the soul searches after what is good and perfect, and having discovered it turns its attention and the energy of its faculties towards it. The 2nd, when the soul begins to contemplate steadily what it has first discovered, and rivets upon it its attention. In the 3rd state, the soul fondly relishes, and is, as it were, entirely taken with it. In the 4th state, the soul calmly enjoys and quietly feasts on the pure truths it has

loved in the former state. In the fifth, the soul, perfectly satiated with the knowledge of truth, remains in a state of complete quietude, perfect fixity, unmovable stability, which nothing can any longer alter or disturb. The Burmese and all Buddhists, always fond of what is wonderful, attribute supernatural perfections to those who have so far advanced in mental attainments. Their bodies become : as it were half-spiritualised, so that they can, according to their wishes, carry themselves through the air from one place to another without the least hindrance or difficulty.

46. *Kamatana* means to fix the attention on one object so as to investigate thoroughly all its constituent parts, its principles and origin, its existence and its final destruction. It is that part of metaphysics which treats of the beginning, nature and end of beings. To become proficient in that science, a man must be gifted with a most extensive knowledge and an analysing mind of no common cast. The process of *Kamatana* works are as follows : Let it be supposed that man intends to contemplate one of the four elements, fire for instance, he abstracts himself from every object which is not fire, and devotes all his attention to the contemplation of that object alone; he examines the nature of fire and finding it a compound of several distinct parts, he investigates the cause or causes that keep those parts together, and soon discovers that they are but an accidental one, the action whereof may be impeded or destroyed by the occurrence of any accident. He concludes that fire has but a fictitious ephemeral existence. The same method is followed in examining the other elements and generally all other things he may come in contact with, and his final conclusion is that all things placed without him have no real existence, being mere illusions divested of all reality. He infers again that all things are subjected to the law of incessant change without fixity or stability. The wise man therefore can feel no attachment for objects which in his own opinion are but illusions and deceptions; his mind can nowhere find rest in the midst of illusions always succeeding to each other. Having surveyed all that is distinct of self, he applies to the work of investigating the origin and nature of his body. After a lengthened examination, he arrives, as a matter of course, at the same conclusion;—his body is a mere illusion without reality, subjected to changes and destruction. He feels that it is as yet distinct from self. He despises his body as he does everything else, and has no concern for it. He longs for the state of *Nibana* as the only one worthy of the wise man's earnest desires. By such a preliminary step, the student, having estranged himself from this world of illusions, advances towards the study of the excellent works which will pave the way to *Nibana*. The Burmese reckon forty *Kamatans*. They are often repeated over by devotees, whose weak intellect is utterly incapable of understanding the meaning they are designed to convey to the mind.

Notwithstanding his singular aptitude in acquiring knowledge, *Phra-laong* devoted six whole years in the solitude of *Ooroowela*, busily engaged in mastering the profound science he aimed at acquiring. It was during that time that he received the visits of five *Rahans*, whose chief was named *Koondinha*. They were very probably, like so many of their profession, travelling about in search of knowledge. They placed themselves under the direction of *Phra-laong*, and in exchange for the lessons they received from him, they served him as humble and grateful disciples are wont to do with an highly esteemed teacher. In this as well in many other circumstances, we see that previous to *Gaudama's* preachings, there already existed in India an order of Devotees or enthusiasts who lived secluded from the world, devoted to the study of religious doctrines and the practice of virtues of the highest order. The order of Buddhist Monks or *Talapoins* which has been subsequently established by the Author of Buddhism, is but a modification of what actually subsisted in full vigor in his own country and in his own time.

47. In a Buddhist point of view the only reason that may be assigned for the extraordinary fast of *Phra-laong* is the satisfaction of showing to the world the display of wonderful actions. Fastings and other works of mortification have always been much practised by the Indian philosophers of past ages, who thereby attracted the notice, respect, admiration and veneration of the world. Such vigorous exercises too were deemed of great help for enabling the soul to have a more perfect control over the senses, and subjecting them to the empire of reason. They are also conducive towards that calm and undisturbed state where the soul is better fitted for the arduous task of constant meditation. In a previous note, I have hinted that there existed many features of similarity

between the life of our Saviour and that of the Author of Buddhism. The fast of Ciandama, preparatory to his obtaining the Buddhahip, recalls to the mind that which our Lord underwent, ere he began his divine mission.

48. Bells are common in Burmah, and the people of that country are well acquainted with the art of casting them. Most of the bells to be seen in the Pagodas are of small dimensions, and in shape differing somewhat from those used in Europe. The inferior part is less widened, and there is a large hole in the centre of the upper part. No tongue is hung in the interior but the sound is produced by striking, with a horn of deer or elk, the outward surface of the lower part. No belfry is erected for the bells; they are fixed on a piece of timber laid horizontally, and supported at its two extremities, by two posts, at such a height that the inferior part of the bell is raised about five feet above the ground. I have never met but with one bell of larger size, and it was certainly a wretched specimen of native skill in casting large bells. It was lying on the ground, not apparently deemed worthy of being hung up. Bells are to be seen only within the enclosure of Pagodas.

49. The Nats or Dewatas play a conspicuous part in the affairs of this world. Their seats are in the six lower heavens, forming with the abode of man and the four states of punishment the eleven seats of passions. But they often quit their respective places, and interfere with the chief events that take place among men. Hence we see them ever attentive in ministering to all the wants of the future Buddha. Besides, they are made to watch over trees, forests, villages, towns, cities, fountains, rivers, &c. These are the good and benevolent Nats. This world is also supposed to be peopled with wicked Nats whose nature is ever prone to evil. A good deal of the worship of Buddhists consists in superstitious ceremonies and offerings made for propitiating the wicked Nats, and obtaining favors and temporal advantages from the good ones. Such a worship is universal and fully countenanced by the Talapoins, though in opposition with the real doctrines of genuine Buddhism. All kinds of misfortunes are attributed to the malignant interference of the evil Nats. In cases of severe illness that has resisted the skill of native medical art, the Physician gravely tells the patient and relatives, that it is useless to have recourse any longer to medicines, but a conjuror must be sent for, to drive out the malignant spirit who is the author of the complaint. Meanwhile directions are given for the erection of a shed, where offerings intended for the inimical Nat are deposited. A female relative of the patient begins dancing to the sound of the musical instruments. The dance goes on at first in rather a quiet manner; but it gradually grows more animated until it reaches the acme of animal phrenzy. At that moment the bodily strength of the dancing lady becomes exhausted, she drops on the ground in a state of apparent faintness, she is then approached by the conjuror, who asks her if the invisible foe has relinquished his hold over the diseased. Having been answered in the affirmative, he bids the physician to give medicines to the patient, assuring him that his remedies will now act beneficially for restoring the health of the sick, since their action will meet no future opposition from the wicked Nat.

Ignorance brings everywhere superstition in its train. When man is unacquainted with the natural cause that has produced a result or an effect which attracts powerfully his mind's attention, and affects him to a great degree, he is induced by his own weakness to believe in the agency of some unknown being to account for the effect that he perceives. He devises the most ridiculous means for expressing his gratitude to his invisible benefactor, if the result be a favorable one, and has recourse to the most extravagant measures to counteract the evil influence of his supposed enemy, if the result be fatal to him. Having once entered into the dark way of superstition, man is hurried on in countless false directions, by fear, hope and other passions, as well as by the daily occurrence of multifarious and unforeseen events and circumstances. Hence the expression or manifestation of his superstition assumes a variety of forms and undergoes changes to an extent that baffles every attempt at either counting their numberless kinds or following them up through their ever changing course. In addition to the store of superstitions bequeathed by the generation that has preceded him, man has those of his own creation, and the latter, if the thought of his mind and the desires of his heart could be analysed, would be found far exceeding the former, in number. Having spent many years in a country where Buddhism has prevailed from time immemorial and observed the effects of superstition over the people in their daily doings, I have come to the conclusion, that there is scarcely

any action done without the influence of some superstitious motives or considerations. But the most prolific source of superstition, is the belief in the existence of countless good and evil Nats, with whom the imagination of Buddhists have peopled this world.

50. The Burmese like all trans-gangetic nations divide the year into twelve lunar months of 29 and 30 days alternately. Every fourth year they add one month, or as they say, double the month of Watso (July). The year begins on the new moon of March. The days of worship are the days of the four quarters of the moon, but the days of the new and full moon seems to have preference over those of the two other quarters, which latter are scarcely noticed or distinguished from common days. It was on the day of the full moon of April, that Theodato made her grand offering.

51. The Burmese translator not having given in his remarks the explanation or interpretation of Phralaong's five dreams, it seems rather presumptuous to attempt doing a thing the omission of which on the part of the author may be attributed either to voluntary omission or to incapacity and inability. The first dream prognosticated the future greatness of Phralaong, whose sway, by the diffusion of his doctrines throughout the world, was to be universal, extending from one sea to the other sea. The grass growing out of his navel and reaching the sky was indicative of the spreading of his law, not only amongst beings inhabiting the seat of men, but also amidst those dwelling in the abodes of Nats and Brahmas. The ants covering his legs offer an enigma, the explanation of which is served to some future Oedipus. As to the birds of various colors gathering round him from the four points of the compass, and on a sudden becoming all white by their contact with him, they represent the innumerable beings, that will come to hear the preachings of the future Budha with divers dispositions, and different progress in the way of merits, and will all be perfected by their following the true way to merit that he will point out to them. The fifth dream in which Phralaong thought he was walking on a mountain of filth, without being in the least contaminated by it, foreshadowed the incomparable perfection and purity of Budha, who though remaining in the world of passions, was no more to be affected by their influence.

52. We have now reached the most interesting episode of Phralaong's life. He is to become a perfected Budha under the shade of the Gnaong or Banyan tree (*Ficus Indica*, *Ficus religiosa*). There are two circumstances attending that great event, deserving peculiar notice. The first is the preference given to the east over the three other points of the compass, and the second the mighty combat that takes place between Phralaong and the wicked Nat Manh, or Mar. I notice the first circumstance, because it agrees with the tradition prevailing amongst most nations previous to, or about, the coming of our Lord, that from the east there was to come an extraordinary personage, who would confer on the human race the greatest benefits, and cause the return of happy times, like the golden age, so much celebrated by Poets. The Roman historian Suetonius bears testimony to the existence of that tradition as being universally known in his own days. It is not impossible that the same notion might have induced Phralaong to look towards the east at the supreme moment, where perfect intelligence was to become his happy lot. It may be said in opposition to this supposition that the splendor and magnificence of the sun, emerging from the bosom of night, and dispelling darkness by pouring a flood of light on the face of the earth, restoring nature to life and action, were a sufficient inducement to Phralaong for giving preference to the east. But to an ascetic like him, who has been convinced that this world is a mere illusion, such a consideration would weigh very little on his mind and would not be a sufficient motive to induce him to give so marked a preference to the east.

The second circumstance remarkable for the time it occurred, is the great combat between Phralaong and Manh. The first is the personification of goodness and benevolence towards all beings; the second is the personification of consummate wickedness. The contest is to take place between the good principle on the one hand, and the evil one on the other. Phralaong on his becoming Budha will preach a law designed to dispel mental darkness, to check vicious passions, to show the right way to perfection, to unloose the ties that keep beings in the wretched state of existence, and enable them to reach safely the peaceful shores of Nibani. Manh, the devil itself, the father of darkness, of lies and deceit, delights in seeing all beings plunged into the abyss of vices, carried off

the right way by the impetuous and irresistible torrents of their passions and doomed to turn for ever in the whirlpool of endless existences. He looks upon himself as the king of this world, and proudly exults in contemplating all beings bending their neck under his tyrannical yoke, and acknowledging his undisputed power. Now the moment approaches when a mighty antagonist will contend with him for the empire of the world. His mission will be to labor incessantly for the return of all beings from the grasp of their mortal enemy, and let them free from the tyranny of passions. Manh is enraged at the audacious pretensions of Phralaong; thence the gigantic efforts he makes to maintain his rights, and retain possession of his empire. At the time Phralaong left the world to become a Rahan, Manh endeavored to dissuade him from attempting such a design. But on this occasion the tempter summons all his forces to avert, by an irresistible attack, the deadly blow soon to be leveled at him. It is needless to add, that the reader in perusing the detailed account of the attacks of Manh against Phralaong, ought to bear in mind that it exhibits throughout but an allegory of the opposition of evil to good. The victory of Phralaong over Manh exemplifies the final triumph of truth over error.

When the contest was nearly over, Phralaong objected to the claims of Manh to the possession of his throne, on the ground that he never had practised the 10 great virtues, nor practised works of kindness, charity and benevolence, which can entitle to obtaining the Buddhahip. It is to be borne in mind that these qualifications form the real characteristics of a Budha, together with the possession of the supreme intelligence. In this system, they admit that there exist certain beings called Pitsego-Buddhas, who possess all the knowledge and science of a genuine Budha, but as they are divested of those benevolent feelings, which induce the former to labor earnestly for the benefit and salvation of all beings, they cannot be assimilated to the real Buddhas. They keep their science for themselves, and do not render it profitable to others. Buddhists assert that during the duration of those worlds which are not blessed with the apparition of one or more genuine Buddhas, the numbers of Pitsego-Buddhas is very great.

53. The witness whom Phralaong summoned in support of his claim to the undisturbed possession of the throne, was the earth itself. It may be from the example that was set on this occasion, that Buddhists have borrowed the habit of calling the earth as a witness of the good work they have done or are about doing. I will briefly relate what is done and said on such occasions. During my residence in Burmah, I observed on a certain occasion, when taking my evening walk, about ten or twelve persons of both sexes assembled in a rather retired spot, in the vicinity of a Pagoda. As they appeared all quite attentive, I came near to them to see what was the cause that had brought them thither, and what occurrence seemed to rivet their attention, and as I was known to some of them, they were not frightened by my sudden apparition. On my asking them the motive of their assembling here at a late hour, they said, that having buried yesterday a child two years old, they came to make some offerings of boiled rice, plums, and other fruits, to propitiate the Nat of the place. Having asked them to repeat the formula they had uttered on the occasion, they kindly complied with my request. Here is the substance of that formula. "Believing in the three precious things—Budha, the law and the assembly of the perfect, I make this offering that I may be delivered from all present and future miseries. May all beings existing in the four states of punishment, reach the fortunate seats of Nats. I wish all my relatives and all men inhabiting this and other worlds, to have a share in this meritorious work. O earth and you Nats, guardians of this place, be witnesses to the offering I am making". On uttering these last words, the offerer of the present or a Talapoin sent for this purpose, pours down some water on the ground.

54. As the Nats and all other beings are to be benefitted by the preachings of Budha, it is but natural that they all join in singing his praises and exalting his glorious achievements. The Nagas and Galongas are fabulous animals, which are often mentioned in the course of this legend. It has been observed in a former note, that according to the Budhistic notions, animals are beings in a state of punishment, differing from man not in nature, but in merits. Some of them having nearly exhausted the sum of their demerits, begin to feel the influence of former merits. They are supposed to have to a certain extent the use of reason. No wonder, if they rejoice at seeing the triumph of him, who is to help them in advancing towards a condition better than their present one.

55. The Banyan tree at the foot of which Phralaong obtains perfect intelligence, is occasionally called throughout this narrative, Bandi tree. The word Bandi

means the perfect science or knowledge. The Burmese in their sacred writings always mention the tree by that name, because, under its shade, perfect science was communicated to Phralesong. It is supposed to occupy the very centre of the Island of Dzampudiba. During all the while Phra or Budha (let us call him now by that name) remained under that tree, his mind was engaged in the most profound meditation which the gigantic efforts of his enemy could scarcely interrupt. It is not to be inferred from the narrative in the text, that supreme intelligence was communicated suddenly or by miraculous process to our Budha. He was already prepared by former mental labors to that grand result, he had previously capacitated himself by studies and reflection for the reception of that more than human science, he required but a last and mighty effort of his intelligence to arrive finally at the acme of knowledge and thereby to become a perfect Budha. That last effort was made on this occasion, and crowned with the most complete success.

56. Buddhists allow to their Budha the power of working wonders and miracles. How is this power conferred upon him? This is a difficulty they cannot explain satisfactorily. The science of Budha makes him acquainted with all the laws regulating nature, that is to say the ensemble of the animated and inanimate beings constituting a world, but one is at a loss to find the origin of that power which enables him, as often as he likes, to suspend the course of those laws. Be that as it may, certain it is that Budha restored always during the course of his preachings, to miracles in order to convince those who seemed to listen with rather an incredulous ear to his doctrines. Miracles were used successfully as powerful and irresistible weapons against certain heretics, the Brahmas in particular, who taught doctrines opposed to his own. They often accompanied his preachings for increasing faith in the heart of his hearers.

57. The great tempter had been foiled in all his attempts to conquer Budha: in the sadness of his heart, he was compelled to acknowledge the superiority of his opponent and confess his defeat. His three daughters came to console him, promising that they would, by their united efforts, overcome the firmness of the great Rahau by awakening in his heart the fire of concupiscence. The names of those three daughters of Manu mean concupiscence. Those new enemies of Budha are mere personifications of the passions of lust. Pride, personified in Manu, had proved powerless against the virtue of Budha; he is now assailed from a different quarter, the attack is to be directed against the weakest side of human nature. But it is as successful as the former one: it affords to Budha another occasion for a fresh triumph.

58. In Burmah the originator of the great Buddhist system is called Gaudama, and this is his family name. When he is called Rahau Gaudama it means the ascetic belonging to the family of Gaudama. In Nepaul, the same personage is known under the name of Thakiamulri, that is to say the ascetic of the Thakia family. Those who refused to believe in Budha and his doctrines, those who held tenets disagreeing with his own and professed what in the opinion of their adversaries was termed an heretical creed, invariably called Budha by his family name, placing on him the same level with so many of his contemporaries who led the same mode of life. The Siamese give the appellation of Samana Khodom, to their Budha, that is to say Thzamani Gaudama, or Gaudama. The Sanscrit word Thzamani means an ascetic, who has conquered his passions and lives on alms. Gaudama belongs to the Khatraia cast. The kings and all royal families in those days came out of the same caste. Hence his father Thoodaudana was king of the country of Kapilawot.

59. Upasaka is a Pali word which is designed to mean those persons who heard the instructions of Budha, and professed a faith or belief in him and his doctrines, but did not enter the profession of Rahans. Hence they are quite distinct from the Biakus or mendicants, who formed the first class of the hearers of Budha, and renounced the world in imitation of their great master. The Upasakas were therefore people adhering to the doctrines of Budha, but as yet remaining in the ordinary pursuits of life. The two brothers became disciples of Budha, but not of the first class, since they did not embrace the more perfect mode of life of the ascetic.

60. I have, except on one occasion, always made use of the terms meditation, and contemplations, to express the inward working of Budha's mind, during the forty-nine days he spent at the foot of Banyan tree. But the Burmese translator most commonly employs a much stronger expression, conveying the idea of trance and ecstasy. Hence after having remained seven days on the same spot deeply

engaged in considering some parts of the law he was soon to preach, it is said of him that he comes out from a state of perfect ecstasy. This expression implies a state of complete mental abstraction, when the soul, disentangled from the trammels of senses, raises itself above this material world, contemplates pure truth and delights in it. All her faculties are taken up with the beauty and perfection of truth; she clings to it with all her might, regardless of all the illusions this world is filled with. This situation of the soul is much esteemed by all fervent Buddhists. It is the lot of but a few privileged Rahans, who have made great progress in perfection, and obtained an almost entire mastery over their passions and senses. This great gift is, as one may well imagine, ardently coveted by many, who though not possessing it, lay claim to it on false pretence. This being a sin, devotees who relish a contemplative life are very liable to, the framer of the regulations of the Buddhist monks, has pronounced excluded *de facto* from the society, all those who would falsely claim the possession of uncommon spiritual attainments, which they have not. In the book of ordination, used for the admission of candidates to the order of Rahans or Talapoins, this sin is the last of the four offences which deprive of his dignity a member of the order, and causes his expulsion from the society.

61. The five Rahans alluded to, are the very same individuals who met Phra-laong in the solitude at the time he was undergoing a great fast, and performing all sorts of works of self-denial, and corporal austerities in the most rigorous manner. During all the time he spent in those hard exercises of strict mortification to conquer his passions and secure the complete triumph of the mind over senses, he was assisted in all his wants by those five Rahans, who rendered to him the usual services disciples are wont to render to their teacher. When they saw Phra-laong, at the end of his mighty efforts in that great struggle, resuming the habits of a mendicant they left him at once, unwilling to believe that he would ever become a Budha. Our Phra not unmindful of the good services he had received from them, resolved to impart first to them the blessings of his preachings; Alara and Odaka, his two first teachers in the science of Dzane were destined to be the first who would have heard the good news, had they not been dead. Gratitude seems to have been the first and main motive that induced him to select as the first objects of his mission, the very same persons who had been instrumental in furthering his efforts to acquire the Buddhahip.

The unpleasant epithet of heretic is given to those five Rahans, as well as to another, named Upska, as designed to mean that they were holding tenets at variance with those of Budha, and refused to acknowledge him as possessed with the perfect intelligence. Buddhists in their writings, invariably call their opponents by the name of holders of false doctrines. The Brahmins or Pounhas, who refused to seek refuge in Budha, his law, and the assembly of his disciples are styled as professors of heterodoxical doctrines.

From the narrative of this legend, we may conclude with a probability, amounting almost to certitude, that Budha in his preachings addressed himself first to the Brahmins as being by their caste the most influential portion of the Hindu community. Those that are called by the name of Pounhas are the Brahmins living in the world and following the ordinary pursuits of life. Those that are mentioned by the name of Rahans and Rathees, are probably Brahmins, or at least belong to some other distinguished caste like that of the Kchatrias. They were in those days, men whom in imitation of the ancient Greeks we may call philosophers, who belonged to some factions or branches into which the great Indian School was divided. We may conjecture that at that time, India exhibited a scene much resembling that which Greece subsequently offered to the eyes of the observer, in the days of Socrates and Plato, where Schools of philosophy were to be met with in every direction. The Hindu Philosophers, favored by climate and their ardent imagination, carried much farther than the Greek wise men, both in theory and practice, certain dogmas and religious practices. If credit, in an historical point of view, is to be given to our Legend, we may safely conclude that such was the state of India, when Budha began his preachings; his first hearers were Rahans, Rathees and Pounhas, that is to say, the most learned and wisest men in those days. The latter in particular seemed at first disinclined to offer opposition to Budha, they listened to him as to a distinguished Philosopher, his arguments were examined, discussed and answered by them in the best way they could. In that polemical warfare, arguments were at first the only offensive and defensive weapons used and handled by the combatants on both sides. His two favorite doctrines of atheism and Niban which established the two broad lines of separation between the two sys-

tems, begat much discussion and created some animosity between him and his adversaries. But what widened the gap between the two parties and place them in an hostile array against each other, was the broad principle of equality amongst men, latent in the bosom of Budha's doctrines, and levelled at the distinction of castes. Budha preached to men of all conditions without exception, he opened before all the ways that lead to Niban; made no distinction between men and men, except that which is drawn by virtue and vice, merits and demerits. He allowed every one to approach him and take rank among his disciples; faith in his doctrine entitled any man to become numbered amidst his followers, the entrance into the order of Rahans or perfect, was open to all those who by their meritorious actions, and renouncing the world, qualified themselves for this dignity. This principle which put on a footing of equality men of all casts and nations and recognised no real superiority but that which is conferred by virtue and merit, could not prove agreeable to the proud Brahmins. It provoked by its gradual development the animosity of the opponents of Budha's doctrines. The battle of arguments, after having raged with various success, was afterwards converted into one of a bloody character, which ended in the total extermination or expulsion of the Buddhists from the Indian Peninsula.

62. The Mission of a Budha is not, as previously observed, confined to men living on earth, but it extends its beneficial action over all the beings inhabiting the six seats of Nats, and sixteen of Brahmas. Those beings, the latter in particular, are much advanced in perfection, but they are not yet ripe for the sublime state of Niban. Though freed, at least the Brahmas, from the influence of passions, they retain as yet some inclination for matter; they want the help of a Budha to break at once the few slender ties that retain them in the state of existence.

The first preaching of Budha was rewarded with the conversion of five Rahans and of a countless number of Nats and Brahmas. Such a plentiful harvest he could scarcely anticipate to reap, and the very outset of his career, attended with such wonderful success, amply repaid him for the extraordinary exertions he made in order to qualify himself for the Buddhahood. The author of the Legend remarks with an unfeigned pleasure, that owing to the conversion of the five Rahans, the world witnessed the beautiful sight of six Rahandas, congregated on the same spot. The Rahanda has attained the summit of perfection, he has arrived at the last existence, his death will relieve him from the burthen of existence and open to him the way leading to perfect rest, complete abstraction, in a word to Niban. The Rahandas rank first among the disciples and hearers of Budha, they constitute the *élite* of his followers, and form the most distinguished portion of the assembly or congregation of the perfect. We will have soon the opportunity of seeing that the members composing the assembly of the hearers were divided into distinct fractions, and formed different degrees, according to the difference of their respective progress in the way of perfection.

ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.*

By J. R. LOGAN:

LANGUAGE.

PART II.

THE RACES AND LANGUAGES OF S. E. ASIA CONSIDERED IN
RELATION TO THOSE OF THE INDO-PACIFIC ISLANDS.CHAPTER IV. (*Continued*)GENERAL CHARACTERS OF THE BURMA-TIBETAN, GANGETIC AND
DRAVIDIAN LANGUAGES.

Sec. 4. KASIA.†

The Kasia is distinguished from all the surrounding languages, Indian, Ultraindian and Tibetan, by its direct and prepositional ideology. It is nevertheless a genuine member of the Ultraindian alliance, for it is intonated, most of its words are monosyllabic, and its phonology abounds in the guttural, nasal and sibilant consonantal compounds and has the generally surd character, which more or less characterise the adjacent languages and nearly all the western tongues of Ultraindia, including the ruder ones of the Malay Peninsula. The principal compound consonants are *kl, kr, kn, kt, nk, nt, nd, mp, ml, nr, kh, lh, ks, sk, sh, shn, shr, sn, sng*. Some of these sounds distinguish it from the neighbouring languages. The *s* compounds resemble the *k* ones of Mon and Karen. Words like *sner, snep, snem, snam, sngi, sngon, sngaid, kti, hsen, hser, knam*, do not occur elsewhere in the Assam chain or even in the southern band (Kuki, Kyau, Manipuri &c). In this respect, as well as in its greater monosyllabic tendency, Kasia shews less of the harmonic influence which has affected the other languages between the Brahmaputra and the Kyendwen. The structure still more strongly isolates it from all the adjacent languages, and allies it with the prepositional system to the south and east of the Burman. It is a fragment of that system which has either been imported into the midst of the postpositional alliance, or remains in its native place, a solitary record that the Mon-Kambojan formation once extended much further to the N. W. than it now does. The ancient extension of the Mon linguistic influence as far south as the Malay Peninsula and its relation to the Burman family on the one side and the East-Ultraindian on the other, render it probable that this formation once stretched up to Assam and probably all over Ultraindia, the Burman

* Continued from p. 137.

† W. Robinson, in *loc. cit.* p. 336, Grammar and Vocabulary.

and Tibetan systems afterwards advancing into the region from the north. If Kasia is thus a remnant of an older formation that preceded the Burma-Tibetan in northern Ultratania, it acquires a peculiar ethnic importance. Another of its remarkable characteristics is the abundant use of the feminine and inanimate particle (*ka* singular, *ki* plural) as a preplaced definitive article. *Ka* appears to have been originally a generic definitive, for it is used in the plural form *ki* even with masculine words. In the singular they take a different particle, *u*. The plural *ki* is evidently formed by the coalescence of *ka* with a plural particle *i*. * It is very remarkable that *ka* is not only used separately in Kasia, but occurs frequently as a concentered prefix, sometimes contracted to *k*. That it is concentered or merged in the root appears from *ka* or another definitive being preplaced. The sibilant prefix also occurs concentered in the forms *si*, *s*, *sin*, *shin*, and sometimes in the pure aspirate form *hin*. *Da*, *d*, *ḡc.*, are found as prefixes, but very rarely. The following are examples of the use of a separate with a concentered or prefixed definitive. Belly, *ka kapoh* (ipok Mik., vok Naga); Gold, *ka kser* (ser Mik.); Ant, *ka dakin*, (*gagin* Singpho, kin Anam); Day, *ka sūgi* (Tibeto-Ultratania); Dog, *u ksen* (Him.-Ultra.); Ear, *ka skor* (S. Tangkal nakor); Eye, *ka kamat*; Father, *u kapa*; Mother, *ka kami*; † Mouth, *ka shintur* (Nams. Nag. tun.) The prefix *ing* occurs in a few words, as in Mikir. It is probably a modification of *hin*. Like the other Assam languages Kasia has distinct Tibetan traits. Thus qualitives preplace *ba*, the qualitative postfix of Tibetan. The pronominal system is crude, like the ideology generally. But it has been exposed to a succession of changes like the adjacent systems, and if it has not, like the Naga, been deeply influenced by a more developed one, it has been affected to as great an extent as the Garo and Mikir. "I" is the Burma-Tibetan *nga*. "Thou" is *me* or *pha*. It appears to be the Naga (possessive) *ma*, Burman *men*, Vindyan *um*, *am*, *imma*. A similar form is found in Lau, Anam, Chong (*bo*) &c.

* This feminine terminal or flexion has been derived from the Northern branch of the pre-Arian formation of India. It is preserved not only in the Kol dialects but in Arianised Bengali, Hindi and Marathi. The influence of the Ancient Indian or Dravidian formation on the Ultratania-Gangetic languages is considered in Chap. v. But it is interesting, in passing, to note traits shewing that the affinities of these languages are with the Northern more than with the Southern branch of Dravidian, as might have been expected. The forms of the Ultratania-Gangetic pronouns are a conclusive proof of this. It follows that the Kol and other Vindyan dialects and the Maratha-Bengali languages in their non-Arian element, should also present more numerous and direct affinities with the Indonesian languages than the South Dravidian, and this is the case.

† In these two words we find *ka*, in its concentered and more ancient condition, applied to both sexes. It might be inferred from this that the loss of its generic power and its merging in the root were a consequence of the reception of masculine and feminine definitives from another formation. *Ka*, however, was probably more or less concentered previously, as is the case with the definitives in many of the Ultratania and Gangetic languages.

"Ho" is *u* (the masc. def.) which is not the Burman or Tibetan 3rd pronoun, but it is evidently a variation of a root that appears in Garo *ua*, Miri *bu*, Dhimal *wa*, Bodo *bi* and the Tibetan definitive. "She" is the definitive *ka*. The plurals are formed flexionally by substituting *i* for final *a*,—*ngi*, we; *phi*, you; *hi* they.

There is no combination of the pronoun with the verb, and the time is expressed by preplaced particles. The future is reduced to a single letter, *n*, [Marathi *-el*, Kol *-en*, Gond, 3d person, *-n*] which unites with the preceding pronoun, e. g. *ngaa rakhi* "I will laugh," as in some of the African languages and in some Polynesian dialects. Slight traces of incipient flexion like this, the negative postfix, the plural forms of the pronouns &c., are of a similar kind to those exhibited not only by the adjacent Burma-Tibetan but by other crude languages, that have become in any degree harmonic, Aonesian, Scythic, African &c. The particle of the past is *la*, which is emphasised by repetition. The same particle is the preplaced *la* of the completive in Naga, which appeared as an incongruity in its Burma-Tibetan system. Kasia explains its position. It Marathi-Bengali, and, in another form, S. Dravirian. It is simply an ad-transitive particle, preserved with most of its Indian and Scythic forms in the cruder Tibetan (*la*, *ra*, *na*, *du*, *tu*, *su*). Words are made negatively assertive by postfixing *m*, the full form of which occurs in *em*, no. This is a Burma-Tibetan particle. The directives are prepositional. *Jong* poss. (Bodo *jang* "by"); *ia* "to" (? *ye* Drav. obj.); *na* "from" (Tib.); *ha*, *sha*, "in" (Tablung Naga; *sah* in other Naga dialects, *ham*, *him*, *ho* in compounds; Dhim. *sho* "from"). The last combines with other particles, *hapoh* into, *haba*, *handa*, then &c. as in Naga dialects. A number of vocalic particles are used, which Mr Robinson considers to be non-significant and generally euphonic. But it is not improbable that they have a definitive power. *Ba*, *nah*, *te* are mentioned. *Ba* is the qualitative prefix and it has evidently a definitive or attributive power in other classes of words. It occurs in *haba* then, *shawa*, first (*shi* is the Mikir *chi*, "one," of Tibetan origin, found in the Kasia *shépon*, ten). The following examples from Mr Robinson will illustrate the remarkable contrast between the Kasia and the Burmah-Tibetan languages. In the translation I have altered the arrangement of the words so as to accord with the Kasia original. *Ka karteng jong u mon*, "the name of the (m.) man." *Ki baniat jong u kla*, "the (pl.) tooth i. e. teeth of the tiger." *Ka reng u blang*, "the horn (of) the (m.) goat." *U kanna babba*, "A (m.) child (i. e. boy) good." *Khat ia nga, ba nga ruh ngan leit*, "call to me, I and I shall go." Here *nga*, I, is pleonastically repeated. The conjunctive *ruh* follows the pronoun. So in the next example. *U la shim ka ga na ka kti jong nga, u la ai*

ruh ia u *ksen*, "he did take the rice from the hand of me, he did give and to the dog." *Katari jong nah ka neh*, "the-knife of who the this?" Here the definitive before the demonstrative serves for the copula, as in Polynesian. *Ka neh ka ung u kapa jong nga*, "the this the house the-father of me." In *kapa* the *k* is a concreted definitive. *Kam kam shu*, "she-not does work."

The Kasia may be considered as rendering complete the evidence that the N. Ultraindian languages are composite. They are far from attaching themselves exclusively to the Burina-Tibetan formation, and all show an absence of that full and consistent development of the inverse ideology which characterises its purer languages. The Kasia has been based upon a distinct formation, which has also left traces in the adjacent languages. Mr Robinson tells us that although the inverse collocation prevails, they are far from rigidly adhering to it, and we have already seen what Mr Hodgson says with respect to the Bodo in particular.

Sec. 5. NORTH GANGETIC OR HIMALAYAN LANGUAGES.

Mishmi.

Having now briefly and imperfectly reviewed all the known languages to the south of the valley of Assam, with the Gangetic Bodo and Dhimal, I proceed to the Himalayan, starting from the head of the valley. From this point to a little west of 93°, several independent tribes occupy the sub-Himalayas. This country has never been fully explored, and some of the upper tribes are only known by name.

The Mishmi, who occupy the eastern extremity of the mountain borders of Assam, are said to have a rude phonology, characterised by peculiar tones and difficult consonants. At least two dialects are spoken, that of the Mezhu and that of the Tain (Griffith). No specimen of the language has yet been furnished save Mr Brown's vocabulary of 60 words.* In phonology it appears to resemble the Singpho more than the Abor or Tibetan. The aspirate and sibilant *sh*, *tsh*, *zh*, *th*, *dh*, *gh*, *hh*, *ts*, *dz*, appear to be common. The Singpho *mp*, *ml*, *mt*, *mgr* occur. The common Tibeto-Anam liquid combinations are found, *pr*, *tr*, *hr*, *hl*, *gr*. It has a strong *r*. In 100 words, 30 nasal finals occur, *ng* 18, *n* 7, *m* 5. None of the other Tibetan and Abor consonantal finals occur. This limited range of consonantal terminals is one of the distinctive peculiarities of the Irawadi

* J. A. S. 1837 p. 1031. The following geographical, tribal, titular and other names, from the notices of Wilcox, Griffith and Rowlett in the Transactions and Journals of the Asiatic Society, throw some additional light on the phonology. Mishmi, Mlee, Mizhu, Manneah, Tshee, Dhah, Tunmah, Tuppang, Gam, Laikwah, Mujedagrah, Damipao, Tibla, Prepang, Sinwa, Deeling, Thuma, Lamplang, Yew, Ghalaou, Khasia, Pri msong, Trusong, Krisong, Mey-hao or Mey-jao, Tacon, Tapan, Lung, O, Tidding, Meerisao, Ruling or Ruding, thaya, (mountain) geithaoun, Mosha, Agakong, Shiku.

languages, when compared with those of the Tsangpo, Menam and Mekong, and the stronger Chinese phonologies. The tones are another Ultratibetan and non-Tibetan trait. Like the adjacent Singpho and other northern members of the Burman family, Mishmi possesses definitive prefixes. *Ma, na, a* are the most common. *Ka, ta* are rare. Glossarially it has a very slight agreement with Tibetan and a very extensive one with the adjacent languages on the west (Abor), east (Singpho &c) and south (Naga, Manipuri &c). The closest and most numerous affinities are with the Manipuri languages.

*Abor.**

The Abor-Miri language belongs to the old Assam alliance, but it has been greatly modified by Tibetan. It has a strong ideologic resemblance to the Dhimal, Bodo, Garo, and Naga, but with some specific Tibetan traits. The glossary has affinities with all the adjacent languages, but by far the most numerous are with the Naga. Glossarially it is a Naga dialect. Besides words common to it with Tibetan and Burman it has a number of special glossarial affinities. 100 words in Captain Smith's Sadiya Abor-Miri vocabulary give the following finals,—Vowels 57; Consonants 43,—*ng* 19, *n* 4, *m* 2; *k* 6; *t* 2; *r* 4; *s* 1, *h* 4; *b* 1. It will be remarked that *ng* forms nearly one half of the consonantal finals, and that the sonants *g, d*, are absent. Mr Brown's Miri and Abor vocabularies, on the contrary, are sonant, the final *k* and *t* of the Sadiya vocabulary being frequently replaced by *g* and *d*. Thus epuk becomes epug; piak, puag; dumit, dumed; yuek, eyeg. The two dialects thus present a similar contrast to the two forms of Tibetan. The phonology appears to be a greatly softened and simplified form of the old Tibeto-Ultratibetan, and as it is said by Mr Brown to be easy and flowing, it has probably been modified by the influence of the harmonic old Indian phonologies. Amongst its other sonant and Tibetan characters is its possession of *z*. Consonants seldom combine, but they freely meet (*rd, ld, nd, ln, ngh, nj, smk, tk, pk, hp, pd, md, mr, bd, ngm, ngg, mp, mb, ks, &c.*) It has a slight tendency to compound vowel finals. "Road", Burma-Tib. *lam*, Mir. *lambeu*; "man," *mi* Tib., *amie* Ab.; "tiger," *simiu* (Tib. *simi* "Cat."); "father" *yeai*; egg, *apiu*; "blood," *iyé*. It possesses the definitive prefixes of the N. Ultratibetan languages, *ta, ka, a, ma, me, na, si*. Numerals have not only the prefixes but a postfix *ko*. Qualitatives take the postfix *dah, dag, or do* (Dravirian *da*.) The definitive prefixes and postfixes being removed, the vocabulary consists mainly of monosyllabic words. The possessive is *ga* (Chang-

* W. Robinson, *loc. cit.* p. 224. Grammar of the Miri; Voc. of the Miri and Abor. N. Brown, J. A. S. 1837 p. 1032, Voc. B. H. Hodgson, J. A. S. xviii, part II. (1849) p. 969, Vocabularies of Abor-Miri by Captain Smith and of Sibsagar Miri by Mr Brown, furnished by the latter.

lo *ga*, Tib. *gi*.) The Tibetan directive *la*, *na* appears in the locative *lo*, abl. *loken*. The instr. is *koki* (Tib. *kyi*.) The words of gender are *baka* m. (Tib-Ultr. *po*, *pha*, *wa*, &c.), *neka* f. (Naga *nyong*, Singh. *nu*, &c.) in which *ka* appears to be the def. of Tibetan, Kasia, &c. These words are postfixed to the substantive, which loses its first syllable when it has two,—a curious American trait, but one that is necessarily found, in some degree, in all formative languages that are not completely concentered. In Abor it probably arose originally from the *ka* in the postfix supplying the place of the prefixed definitive, which the initial frequently is. But even when the word is a double one, the first root is dropped. The elliptic tendency is carried still further when the sex is the subject of a question, for the definitive postfix of the sex word is dropped. *Site*, elephant, *te baka*, a male elephant, *te neka* a female elephant; *tene teba*? “Is it a female or a male elephant?”

The pronouns are simple. “I” is Tibetan, *ngo*. “Thou”, *no*, *nang*, and “He”, *bu*, are Gangetico-Ultraiadian (Naga, Dhimal, &c.) The pronouns have a Dravirian plural postfix *lu*, corresponding with the Dhimal *-al*, *-el*, Mikir *-alli*. They shew some traces of incipient flexion through ellipsis, like the S. Assam languages. The possessive *ga* becomes *g*, and they take an objective postfix, *m*, which is not used with substantives. In the plural, substantives are followed by the words *a-rang* (Garó), *ki-ding*, signifying “all,” which evidently contain nasal forms of the roots found in the Bengali plural postfixes, *era* and *dig*. It has an assertive postfix *-abang* (Tib. *ma*) which is postfixed to the time particles. The initial of the assertive postfix is changed to *m* to express the negative, that is, *ma*, “no,” coalescing with *bang*, forms *mang* (Kasia, Burma, &c.) The time particles are *da* present (Bodo *dang*); *lada*, emphatic or definite (*la* completive, Naga, Kasia); *ka* past (? *ha* Singh.); *ta* completive (*t*, Naga Drav. &c.); *pa* future (Drav.)

The Aka dialects appear to belong to the Abor group, 35 words in Mr Brown's list of 60 being common to Aka and Abor and prefixes occurring as in Abor. *

* Since this paper was written I have received the number of the Journal of the Asiatic Society (2 of 1851) containing Mr Robinson's “notes on the Dophlas and their language.” The language is identical with Aka and merely a dialect of Abor or Miri. The affixes of gender are *bo*, *po*, m. and *ne*, f. and the preplaced substantive loses its first syllable (M.) The common directives are *-g* poss. (*-ga* M.); *-bo* ad-trans. (*-nape* or *-kape* M.); *-gan*, ex-tr. (*-kam*, *-loken* M.); *-mona*, inst.; *alo* loc. (*to* M.) The qualitative follows the substantive. The pronouns have the Miri forms. The 3rd is *ma* (Miri *bu*). The particle of the present is *do* (M. *da*); perfect, *pana*; future, *bo* (M. *pu*). In the vocabulary *ta-* is a frequent prefix to substantives; *-do* and *-po* are often postfixed (Tib.) to subs. and *pa* to qualitives. Final *k* and *g* are common. It is clear from the above that Dophla is simply a dialect of Abor-miri. That it is identical with Aka, appears from Mr Brown's list of Aka words which are all Dophla (a few are not contained in Mr Robinson's list). According to Mr Brown, 17 words in 100, or about half, are common to Aka and Abor.

*Changlo.**

Changlo has a considerable amount of glossarial peculiarity compared with Tibetan, but in other respects it is entirely Tibetan, softened and slightly changed in phonology. The particles are, with few exceptions, Tibetan, the application slightly varying in a few instances. Thus one form of the possessive is *ga*, perhaps the original or full form of the definitive, which is combined with the Tibeto-Burman possessive *i* [itself probably a contraction of the Scythico-Dravidian, African, and Asonesian *ni*] in *gi*, *gyi* T. It is used in place of the T. *la* in the dative, (*ga*), and ablative, (*gai*). The locative *nang* is the T. *na*, *la*, nasalised.

The numerals are Tibetan save *thur*, 1, and *phi*, 4. *Nyik-ching* 2, is compounded of the Tibetan 2 and 1 [*nyis-chig*]. *Khung*, 6, is the T. *tha* gutturalised and nasalised. In 7 the T. *dun* becomes *zum*. *Yen*, 8, is the Bhutan *gyed*, T. (written) *brgyud*. *Se*, song, 10, is the T. *chu*.

The pronouns exhibit similar changes. The T. *nga* "I," is *jang*. The T. *khe*, *khyed*, "Thou," is replaced by the Gangetic-Ultraindian *nan*, and *kho* "he &c," by the definitive *dan*, a nasal form of the common Gangetic *ta*, to which the Tibetan *di*, "this," *de* "that" is related. The same root appears in the Changlo *tha* "this" (T. *the* "which".) "That" is *nya*, and "you" *lela*.

The assertive postfixes are *le* present [? Garo *na*, Bodo *dang*]; *ba*, past [Bodo *bai*]; *dong* future (probably the Bodo *dang* of the present, the time particles being dialectically very inconstant and interchangeable in formations like the Gangetic and Tibetan). *Wa* (present emphatic of Bhutan) is used in the infinitive. *Cha*, *cho* is an intensive assertive. *Jang dencha* "I am going," *Jang denchoba*, "I was going". It occurs frequently in the vocabulary as a verbal postfix. The T. postfixes *po*, *mo* are used. *La*, *lu*, *lo*, is also used postfixually with some qualitives, e.g. *changlo* black; *khalu* bitter [kha, Garo]; *chilu* broad; *chalo* hot [*chatum* T.]. The Gangetic definitive prefixes are also common.

Glossarially Changlo is a compound of Tibetan with another language, which appears to have been a dialect of the ancient East Gangetic language, for it agrees extensively with Bodo, Dhimal and Garo, and has affinities with the other vocabularies of the same alliance,—Miri, Naga &c. The Garo affinities are the closest and most numerous. The Tibetan ingredient in these southern languages appears to have been principally derived from Changlo. In other words, the Changlo was the E. Gangetic nation which, from its position, came into full contact with the Tibetans when they descended as conquerors into the Brahmaputra-Gangetic basin, and has remained so subsequently. The Changlo was thus directly and deeply influenced by Tibetan before it was all but

* W. Robinson, *l. c.* p. 202. Gram. and Voc.

transformed into it, by adopting its structure, particles, and much of its vocabulary.

*Nipal Dialects.**

In phonology the Nipal languages have a strong resemblance to each other and to the Abor. The Lepcha is more Tibetan in its terminals than the others, having about 70 per cent of consonants, *m* forming no less than 14. The nasals collectively amount to 39, which causes the large excess of consonants when compared even with Tibetan. The Tibetan definitive postfix *ma* is frequently contracted to *m*. e. g. *karma*, "star," becomes *kam*, *nyimo*, "day," *nyim*. So *khain*, "anything," becomes *tham*. The Serpa resembles the Tibetan (spoken), having about 34 per cent of nearly the same consonants. The other languages are more vocalic. All possess a considerable proportion of nasals, with the exception of Sunwar and Magar. In Sunwar, Gurung, and Newar, *m* is absent or rare. Newari is the most vocalic of the whole, *ng* and *n* being almost the only consonantal terminals. After nasals, gutturals and dentals form the largest class of finals, the surds (*h*, *t*,) being the most common. But a sonant tendency is very perceptible in several of the languages. *G* forms about one per cent in most. *D* is rare, save in Gurung, in which it forms 10 per cent, arising from its being apparently the contraction of a verbal postfix. Of the liquids *r*, *l*, *s*, the first only is common, forming 1 to 5 per cent in most of the languages. The labials *p*, *b*, form nearly the same proportion, the sonant being rare, however, save in Murmi. In thus possessing labial finals, the Nipal group is more consonantal than the East Gangetic languages, including Abor. In their phonetic elements Serpa and Lepcha resemble Tibetan (spoken). Both possess *z*. Sunwar, Kiranti and Gurung have *v*. In the other languages *z* and *v* appear to be absent. The double consonants are the liquids (*kl*, *kr*, *pl*, *pr*, *bl*, *br*,) and the aspirates (*kh* &c.) The former are rare. The dento-sibilants, *ts*, *tsʰ* occur in Lepcha (rarely). *M* may precede liquids in some of the languages, and *w* follows consonants in all. According to Dr Campbell the Limboo is more pleasing to the ear than the Lepcha, being labial and palatal rather than nasal and guttural.

The Tibetan postfixes *po*, *mo*, &c., are found in Serpa (*ba*, *ba*, *mo*, *ma*,) Lepcha (*bo*, *mo*,) Kiranti (*ba*, *na*, *va*, *vo*,) Sunwar (*pha*) but they are rare, save in Serpa, with substantives. As qualitative affixes they occur in Serpa, Lepcha (generally contracted to *m*,) Limbu (*ba*, *pa*, *va*, *ma*, euphonically *la*, *ra*,) Kiranti, Murmi (*ba*, *pa*,) Gurung (*ba*, *va*, *bo*,) The Tibetan *ka*, *ga*, occurs in

* E. H. Hodgson, J. A. S. xvi, part ii. [1847] p. 1244, Comp. Vocs. of Nipal lan., gu ges (corrections, ib. 1848 p. 74); Voc. of Chepang, ib. xviii, part ii. (1848) p. 652. A. Campbell, ib. 1842 p. 5, 1840 p. 595 &c., 1839 p. 623 &c., 1841 p. 41 (Murmi, Limbu, Kooch &c.). Hodgson, A. R. xvi, 410, Newari Voc.

Newar (*ku, ko, gu, gu.*) Magar and Sunwar have *rho* (generally so in Sunwar.) To numerals Kiranti suffixes *ya* and Limbu *sh*. Verbal postfixes occur in all the vocabularies—*le, re, ne, e* Limbu; *ra, na, a* (apparently) Kiranti; *ni, na* Magar &c., Mr Hodgson says the Murmi, Gurung, Magar and Sunwar in speaking always add a terminal *o* to the imperative, with an euphonic or harmonising consonant before it, if the root end in a vowel. This appears to be the Tibetan assertive postfix which is found in Garo &c. also. Some of the lists of verbs shew a tendency to a particular consonantal terminal, but they are too short to judge whether any of these are formatives. Apparently they are not.

Besides these formatives some of the vocabularies exhibit a different class, by which they clearly indicate their alliance with the East Gangetic and Ultraindian group. These are the definitive prefixes. *A* (rarely the full form *ka, ak*) is very common in Lepcha, both before substantives and qualitatives). With the numerals the full form *ha, kha* is used as in Kasia. Liang "skv" takes *ta*. Limbu has *ke, ku* (qualitatives). Kiranti has *u*. In the more Tibetanised languages prefixes occasionally occur but the Tibetan influence appears to have in general rendered them obsolete. In Limbu *na* occurs in *makhi* blood (*hi* New. *usi* Sunw. *hyu* Mag.) Kiranti has *ko* in *kochu* dog (*kazeu* Lep., *kuchung* Sunw., *chhya* Mag.) Murmi has *na, ta* in *namya* bird (*bhya* Lhop. *byu* Tib.), *nangi* dog, *tarnya* fish (*nya* Tib.) *Mi* occurs in Magar as in Changlo. *Ba, pa, pha*, occur in some words of the Gangetico-Ultraindian alliance.

The particles are partly Tibetan and partly Gangetic. The plural postfixes (pronominal at least) are mostly Gangetic,—*rang* Serpa [Garo, Miri, Bengali]; *yu* Lepcha; *ni* Murmi; *in, n* Kiranti; *ping* Newar; *mo* Gurung, [Naga &c.]; *hurik*, Magar [Bengali *dig*, Asam *bilak*; ? Bodo *chur*]; *hi* Sunwar; a variety which sufficiently declares their crude character. *Chi* occurs in "They", Kiranti, Limbu. It is possibly from the Tib. *chag*, which in Lhopa becomes *cha*, but as it is no doubt identical with the Sunwar *ki*, I think it may be safely referred to the Ultraindian *ki* [Kasia &c.]. The possessives are Serp. *ti* [probably from Tib. *kyi*, but perhaps Dravirian, *di*]; Lepch. *sa*; Kir *ko, so*; Limb. *in* [Bodo, Drav. *ni*]; Mur. Gur. *la* [Singphu *na*]. In Newar and Sunwar they are Tibetan, *ko, gu, ke*, [Tib. *kyi, yi, gi*, Dhimal *ko*, Changlo, Miri *ga*]. The Tib. directive *la, na, da, tu, su, &c.* occurs in Kiranti *da*, Serpa *la*, Murmi *ta* "with", Lepcha *sa* "with" (through Lhopa *da, cha*), *Sa* is also the poss. in Lepcha and it occurs in *satha* "when", *saba* "where", *sagong* "within", *satet* "how much", *salom*, "as", "how", *sare* "which". The Tibetan conjunctives *yang, da*, occur. Limbu *ang*, Newar *ang, nang*, Serpa *ang, dang*, Murmi *ya, den*, Gur. *ye*, Magar *ra*. The Murmi and Gurung *ri*, the Sunw. and Limbu *no* and the Sunwar *ni* are distinct. The Limbu *nu* is the Tib. *ru, du*.

The pronouns are mostly Tibetan with some phonetic variations, but several are Indian and Ultratibetan. "I" *go* Lep. Sunw., *inga* Limb., *anka* Kir. [Bodo, Garo]. In *ji* of Newar the initial element in the *Changlo jung* appears. In the 2nd person the only forms that are modern Tibetan are *khens* Limb. *khana* Kir. *ken* Gur., in which the Tib *khe* appears with a def. postf. *Chhu* Lhop., *chha* Newar, is probably a sibilant form of the old or written Tibetan *khyes*, as it is preserved without the final consonant in *khyo* Serpa. *Hau* Lepcha is also an immediate derivative from *khyo*. *Gai* Sunw., contracted to *ai* in Murmi, is also apparently Tibetan. *Nang* Magar is E. Gangetic &c. [Bodo to Singpho]. In the 3rd pronoun *khune* Limb. preserves the pure Tib. form, and the Lepcha *heu* is an aspirate form of it, modified euphonically by *heu* "thou". In the plural *hoyu* the Tib. form is better maintained. It appears under the same aspirate form, with def. postfixes, in *hos* Magar, *hari* Sunw. The other forms are Dravidian-Gangetic,—the Murm., *thi* Gur.; *wo* Newar [Dhimal, Garo, Kasia, Miri]. *Moko* Kiranti appears to prefix a def. [Limbu *mo* "in, on,"] to the Tib. root.

From these examples it may be gathered that the connection between the Tibetan and the native Nipal languages is complex. The forms that resemble the Lhopa and the modern or spoken Tibetan must be referred to the influence of the present Himalayan tribes of the Tibetan race. But those that have been immediately derived from Tibetan in its ancient form cannot be so explained. They shew that Tibetan deeply influenced the Lower Himalayan languages at a period when it still retained its strong phonology, and that some of these languages have participated slightly and unequally in the changes which Tibetan has undergone in Tibet itself, as well as in the purely Tibetan communities on this side of the passes. The direct connection between the Tibetan and the native population must at one time have been more widely extended than it is at present. It must also have been very intimate, because it has not only induced an adoption of a mass of Tibetan substantive words but even of several particles, including pronouns, a result which necessarily implies that the ancient Tibetans were long located amongst the native tribes as a dominant race, retaining their own language, and that, while their dominion lasted, Tibetan was the language of intercourse between them and the natives, and probably also to some extent a *lingua franca* among the different tribes of the latter.

The same conclusions may be drawn from an examination of other classes of words. The numerals, for example, are, to a great extent, Tibetan, but they are not purely so, nor are they referable to the modern Tibetan.

I shall briefly examine the Chepang, Kusunda and Haiu tribes separately. Mr Hodgson was so much impressed with the difference

in form and colour between them and the surrounding more Tibetan tribes, that, at one time, he considered them to be fragments of a prior Indian population allied to the Kols. Some years later, when he enquired into the affinities of the Chepang language, "he found that with the southern aborigines there was not a vestige of connection, whilst to his surprise he discovered in the lusty Lhopas of Bhutan the unquestionable origin and stock of the far removed and physically very differently characterised Chepangs". The linguistic demonstration, as he considers it, of this identity of origin, consists in the fact of his Chepang vocabulary of about 350 words having 27, or less than one-twelfth, that are Lhopa or Tibetan (or both). The proportion of Tibetan words is, in fact, larger, but the mass of the language is non-Tibetan, and all that can be concluded, I think, from the number and nature of the Tibetan engraftments is that the Chepang, like the other Gangetic tribes of the region, were long in contact with a dominant Tibetan race. Along with these Tibetan words it has received the postfixes *wa*, *wo*, *ba*, *pa*. It also uses *rang*, *lang*, *rong*, *nang*, *la*, *ra*, with substantives. With qualitives it uses *to*, probably the Kiranti possessive *ko* (Dhimal &c.,) and with verbs *chang*, sometimes contracted to *sa*. *Lo* is a qualitive privative [*pito* "good," *pilo* "bad"; *jokto* "strong", *joklo* "weak"; *nimto* "sweet," *mimlo* "sour"]. The pronouns and particles are not given.

Chepang does not appear to have definitive prefixes (save the indefinite *ya*, "a" "one", e. g. *yalla* "a month", *yatang* "a year", *yagur* "the whole"). Discarding the postfixes, the words are, in general, monosyllables. Glossarily the language belongs to the Gangetic family.

Sec. 6. VINDYAN OR NORTH DRAVIRIAN DIALECTS:

The data for this N. E. and partially modified Dravirian group are defective, but they are sufficient to prove that its languages graduate from Dravirian to partially Gangeticised or Ultradravirianised Dravirian. In other words, it is close in character, as in position, to the Dravirian, and at a considerable distance from the Tibetan and the Burmah-Gangetic. The Gond is Dravirian, hardly at all affected by Gangetic. The Khond, if not identical, probably agrees with it more than with Kol, and the basis of the latter is Dravirian. The Uraon and the Male or Rajmahali dialects are still closer to the Gond and South Dravirian than the proper Kol.

I. *Male and Uraon.*

For the Male or Rajmahali, the most eastern dialects, and those which, it might have been supposed, were longest in contact with the East Gangetic, we have only vocabularies by Major Roberts

(A. R. iv. 127) and by Mr Hurder (in Mr Hodgson's series, J. A. S. xviii. 553.) The Uraon vocabulary of Colonel Ousely (Hodgson's series) has so much resemblance to the Male that it may safely be set down as a dialect of the same language. It frequently agrees with the Male where it differs from the Kol dialects, with which it is now in contact in Chota Nagpur. This may be considered as confirming the tradition of the Uraons, that their original country was Rotas and parts of Rewa, or the hills along the northern bank of the Soan (to the southward of Benares). According to the tradition, they were driven across the Soan by the intrusion of Gangetic Hindus into their native land, and ultimately settled in Chota Nagpur, the country of the Kol tribe of Munda or Ho. At a later period Hindus spread into this territory, reduced the more civilised Uraons to slavery, drove the wilder Kols into revolt, and eventually forced them to migrate to the southward and eastward into the land of the Bhuians. The more northerly of the eastern emigrants passed out into the low country, and, mixing with the Bhumij and Bhuian natives, formed the class of Tamaris. The more southerly moved into Singbhum and Kolehan, living at peace with the Bhuian pre-occupants until the intrusion of Hindus from Marwar, who first leagued with the Bhuians against the Kols and then with the Kols against the Bhuians, and finally appropriated Singbhum, leaving Kolehan or Hodesam to the Kol or Ho, as this southern tribe call themselves. (Tickell, J. A. S. 1849 pp. 694-7). Remnants of the Kol are still found to the northward nearer Chota Nagpur, and they appear to be also spread to the northward towards Rajmahal. One nomadic tribe, the Sonthal, appears to be very widely spread. It is found in Chota Nagpur and in the skirts and valleys of the Rajmahal hills. It is enumerated by Mr Stirling in his list of the Kol tribes of Katak, and according to Captain W. S. Sherwill its range is from Katak through Chota Nagpur to Rewa, thus embracing the territory of both divisions of the Eastern Vindhyas.

The Male and Uraon languages are mainly Dravirian,* and it is remarkable that although the Male are now confined to the N. E. extremity of the Vindhyas, where the Ganges washes and bends round the chain, and are separated from the South Dravirian nations by the Kols, their language is more Dravirian than the Kol itself. The pronouns and numerals, for instance, are Dravirian, while those of the Kol are Gangetic, Himalayan and Ultraindian. The explanation is probably to be found in the circumstance of the Uraon and Male having, originally, formed an uninterrupted

* Mr Ellis, in his note to the introduction to Campbell's Telugu Grammar (1820), remarked "it is nevertheless the fact that if not of the same radical derivation, the language of the mountaineers of Rajmahal abounds in terms common to the Tamiil and Telugu". p. 3. The Male, Uraon and Gond appear to have from 30 to 40 per cent of their vocables in common with the South Dravirian dialects. (See chap. v.)

continuation of the Gōnd tribes and dialects that extended from the Godavery to the N. E. extremity of the Vindyas. The Kol, again, must have formerly had a greater extension either on the north, breaking through the Male-Gōndian band, into the Gangetic valley, or on the south to the sea-board of Katak and the lower valley of the Ganges, where they would be exposed to the influence of maritime visitors and settlers, Ultra-Indian and Gangetic. But as both the Kols and the Male-Uraons are physically Ultra-Indian more than Dravirian, and the occupation of the Eastern Vindyas and the hills on the opposite side of the Gangetic valley by Ultra-Indians implies that the valley itself was at one time possessed by the same race, the simplest conclusion is that the Kols were an extension of the ancient Ultra-Indo-Dravirian population of the Lower Ganges and the highlands on its eastern margin. As the peculiarities of Kol, when compared with the S. Dravirian, and the Male-Gōndian or purer North Dravirian dialects, are chiefly glossarial, this conclusion will be tested in a subsequent chapter by a comparison of the Kol with the Ultra-Indian vocabularies.

The Male vocabulary is very Dravirian, as Mr Ellis remarked thirty years ago, and so is the Uraon, but both have also Himalayan, Kol, Gangetic and Ultra-Indian affinities. The words appear to be radically monosyllabic, and the vocalic dissyllabic words of the more rhythmic South Dravirian languages frequently appear as consonantal monosyllables, a tendency that allies these dialects to the Gōnd, Kurgi, Tūdava and Ancient Tamil. The vocables not infrequently postfix definitive particles similar to the Gōnd and S. Dravirian definitive postfixes. Male has two, a labial *ve*, *phe*, *pe*, and a guttural *ge* which sometimes takes the aspirate form *che*. Uraon also uses *p*, but rarely, and it appears to replace *che* by *k*. *Ge* takes the surd form *kha*. The same postfix is found in Gōnd under the form *ki* and *k*. Gōnd also uses the labial and aspirate postfixes with the substitution of *i* for the Uraon *e*,—*vi*, *va* &c.; *chi*. In its preference of final *i* Gōnd resembles Karnataka, while the tendency to final *e* is common to Uraon with Tuluva. With some substantives Gōnd also takes the Dravirian postfixes *iya*, *al*, which do not appear to be preserved in the Male and Uraon. The Gangetic and Ultra-Indian prefixes are not, apparently, used in Male and Uraon. The only instances that I have remarked are the Uraon *lakhra* "tiger," (*kula* Kol, *kla* Kasia), *dahari* "road" (*sari* Gōnd, *hora* Kol,) *marag* "horn", (Ultr., *marg* Male), *dape* "foot", (also Himal.), the last being doubtful, as *da* may be the root (Drav. *adi* &c.) and *pe* a postfix. Ex. of Postf.—Air, *thaha* Ur., *take*, *tophe* Mal. Bird Ur. *orak*, (*ure* Kol.) Buffalo, Ur. *mankha*, M. *mange*. Cat, U., *birkha*, M. *berge* (G. *bilat*, Kol. Hind. *bilai*). Hand, U. *khchhah*, Gōnd *kaik* (Drav. *hai*). Head, U. *kuh*, M. *kupe*, (Tib.-Ultra-Ind. *go*, *kho*, &c.) House, U. *cpa*, M. *ava*, (Kol. *ora*, *va*, Drav. *ara*, *ila*,

vidu, &c). Leaf, U. *atkha*, M. *atge*, G. *aki*, (Tam. *adei*). Iron, Gond *kachchi*. Light, Gond *berachi*, Karnat. *bela-hu*. Eye, Gond *kank*, M. *kane*, Drav. *kan* &c. Moon, M. *bilpe*, Tam. *A. pirei*. Plantain, M. *kalvi*, Gond. Kol. (Hind.) *kera*, *kela*.

The Male pronouns are the Dravirian forms of widely prevalent roots. "I," *en*, Male, *enan* Uraon (Tuluva, *en*; Karnat. *an*, Tel. *nenu* &c; the Kol form is *ing*, which is Himalayan). "Thou", *nin*, Male; *nien* Ur. (the root *ni* occurs in all the Dravirian languages, and with the postfix in Karnataka and Kurgi, *ning*; the Kol form is *um*, *am* which is Ultraindo-Himalayan). "He, &c." *ath* M., *asan* U. (*ada*, *ata* &c. Malayal. &c., but with Him. and Ultraindian affinities also; the Kol form is *inti*, Ultraind., Burm., Mon, Kas. &c). The definitive postfix of the Uraon pronouns,—*an*, *en* (*en-an*, *ni-en*, *as-an*) is Dravirian,—*n*, *nu* &c. The plurals are irregular. In Male "we" is *nam*, *om* (? exclusive and inclusive), *m* being the plural element in Gond and all the Dravirian languages. *Nin* "thou", becomes *nina* "you," *ath* "he" (as Ur.) takes a postfix (*bar*, *war*), *asabar*, *awar*, which is itself the most prevalent 3rd pronoun, singular as well as plural, in Dravirian, the singular however having final *l* in place of *r*. The Uraon exhibits the same fragmentary character in its plurals. "We" is the singular root without the postfix. For "ye" *asu* is given which is evidently an error, as *asu* must be "they", being formed from *asan*, "He," in the same mode as *en* "we" from *enan*, "I". As no word is given for "they", *asan* must have been transposed from "they" to "you". The possessive postfix is *-hi* Male, softened to *ghi* and *hi* in Uraon. This is not Gond or S. Dravirian, but Himalayan, Hindi (*ka* &c.), Tibetan, Gangetic, and N. Ultraindian. It is the more remarkable that the Bodo and Garo have the Dravirian *ni*.

The Male verbal postfix (imperative apparently) is *da*, *ra*, *dra*, euphonically varied by mutation or elision of the consonants.

The numerals are irregular. In Uraon they are Dravirian from 1 to 4 (2, 3 and 4 postfixing the Hindi *gotan*, in the contracted form *otan*),—1 *unta*, Gond *unadi*, (Tuluva *onji* &c); 2, *enotan*, (Telugu *rendu*, Tul. *erad* &c); 3, *manotan* (Tam. *munru* &c); 4 *nakhotan* (Toda *nonk*, Tam. *nangu* &c). The higher numbers are Hindi. Male has only two numerals. 1 has several forms. *Art* or *ort*, which is appropriated to human beings, is Dravirian. It is probably a contraction of *unta* Ur. *Undong* is certainly Dravirian, being identical with *unta*. *Pandong* and *Kivong* are also used. 2 is *twer*, which seems to be a cross between the Hindi and the Kol. The other numbers are Hindi.

Kol.

The next dialects to the westward and southward are those of the Kol tribes. Captain Tickell has given us a brief but masterly

sketch of the language of the Ho (J. A. S. 1840, Part II. p. 997). It differs so little in phonology and glossary from the Munda, Bhumij and Sonthal, that Captain Tickell's account of its grammar may be taken as that of the Kol language generally. The Kol is Dravirian considerably modified by Ultraindo-Gangetic, particularly in its glossary, and very slightly by Tibetan. The latter element is so small as to render it certain that the Kol was originally a pure Dravirian language, which was deeply influenced by the ancient Mon-Gangetic. The phonetic basis of the language and many particles and words are Dravirian, but the pronouns, several of the numerals and a large portion of the words are Mon-Anam.* The phonetic elements are nearly the same as the Gangetic, but the Ho is distinguished, like the purer Draviro-Australian languages, by a great tendency to liquids and a considerable one to combinations of liquids and nasals with other consonants. Its structural phonology is more decidedly harmonic and consequently more advanced, agglutinative and polysyllabic. The fluent, flexible and elliptic tendency of Bodo and Dhimal is carried to a higher degree. The vowel combinations and flexions are more complex. The sounds generally are exceedingly pure and liquid, without strong aspirates or gutturals. A slight nasal inflection is frequent. It has the French liquid nasal *gn* like the S. Dravirian. The inflections of the long vowels are said to be inconceivably complex and mellifluous and difficult of imitation. The general cadence is sprightly and cheerful. Liquids are greatly affected. A prolonged *r* is common, and it receives a similar liquid and subtle pronunciation to that of the vowels. The Ho is more sonant and consonantal than the Bodo and Dhimal. It has about 40 per cent of final consonants. Of these *m*, *g* and *d* occur more frequently than the corresponding surds. Liquids are as frequent as nasals, and much more so than any of the other classes. The nasals, including *m*, form only a third to a fourth, and, without *m*, not more than a tenth. In this respect, in the predominance of sonants over surds and of the liquids over the gutturals and dentals, the Ho phonology differs from the Gangetic. It also differs from it in the paucity of its consonantal combinations. The only ones that occur frequently, (sometimes as finals), are the nasals *dn*, *ln*, *nh*. The liquids *dr*, *tr*, *lr*, *rm*, *st*, *gl*, &c. also occur. Conjunctions are common, as *mb*, *bd*, *nt*, *th*, &c. and the liquids *ld*, *dl*, *nr*, *nd*, *rk*, *tr*, *ns*, &c. The absence of *sh* distinguishes it from the south Dravirian languages. Final *s*, found in Gond, is wanting. But initial *h* and a strong *s* are frequent. Most of the words are dissyllables, and the strong harmonic tendency is further shewn by a frequent accord in the vowels of words of more than one syllable.

* The percentage of S. Dravirian vocables is about 15 and that of Mon-Anam about 30.

ble, a trait that is less conspicuous in the Gangetic phonology.

The ideology has a large agreement with the Gangetic, but it has some peculiarities, negative and positive, which connect it still more intimately with the Dravirian. It has no regular definitives, absolute or generic, separate or affixed, substantive or qualitative, like those of the Tibetan, Himalayan, Gangetic and Ultraindo-Gangetic groups. The only particles analogous to the Gangetic ones are the definitive *a*, prefixed to pronouns in the dual and plural and to some nouns,—*sa*, *su*, *ka*, a substantival prefix,—and *ia*, a suffix to numerals, which, however, is merely a possessive postfix. There are no particles of gender but in *koa* boy, *koi* girl, *koahon* son, *koihon* daughter, a N. Dravirian flexional trait is seen.* It has possessive and ex-transitive postfixal formatives (*a*, *te*) but no ad-transitive or objective, the object being determined by its position, as in Tibetan &c. The possessive particle, *ia*, *ea*, *a* is Dravirian. It is postfixed to numerals (*baria*, *apia* &c), which are thus possessives as in Dravirian. It is also postfixed to many qualitives as in Dravirian, e. g. "thin," *patalia* (Hind. *patla*); "great," *maram* S. &c. *marangia* Sonth.; "small" *huring* S. &c. *huringia* Sonth.; "raw" *baral* S., *baralia* Sonth. Other possessive particles are also used. *Mundala* has *tana* with pronouns and some qualitives. It is a combination of two forms of a Dravirian possessive, both of which occur in *Gond* and *Karnataka* (*da*, *na*). The occurrence of double postfixes is not infrequent in Dravirian vocabularies, as in those of most other agglomerative formations, and it is common with qualitives in *Kurgi* and *Tuluva*, the latter affecting *tano* like *Mundala*. The *Kurgi tad*, *dad* is the same combination without the final vowel, and it appears also to be used in A. Tamil (*dana*). *Kurgi* also has *pal* (for *pa-la*).

Both *da* and *na* are found as qualitative postfixes not only in *Gond* but in other *Kol* dialects besides *Mundala*, e. g. "Bitter" *kayippa*, *khayi*, *khayipe*, *kaipal* &c. S. Dravirian, *kaduta* (probably the *du* was also originally a definitive) *Gond*, *karkeh* *Male*, *harkah* *Uraon*, *harpan* *Mund.* (*kai-pal* *Kurgi*), *harrada*, *harda*, *hawera* *Kol*. "White," *Drav.* *velia*, *veluta*, *bile*, *bolare*, *baltad*, *pelpam*; *Gond* *panguro*, *Ur* *pandru*; *Kol* *pundi*, *punda*, *punia*.

The pronouns are the same in all the dialects,—*I*, *aing*, *ing*, *inge*; "Thou," *um*, *am*, *umge*; "He &c." *ini*, *uni*. These forms differ from the *Male*, *Uraon*, the *Gond* and the *Dravirian*, and are

* See the note to Sec. 4 (*Kasia*). Although *i* appears to have been characteristic of the northern branch of the Ancient Indian (or Dravirian) formation it is preserved in the Southern also in Malayalam. Where the non-Ultraindo-Gangetic and non-Arian traits of *Kol* and other Vindayan languages differ from the South Dravirian, affinities are to be sought in the Arianised languages of the Ganges and Indus and of Afghanistan and Beluchistan, which preserve remnants of Dravirian in its Northern form.

identical with Ultraindo-Himalayan forms. *Ing* is U.-Himalayan (*inga* Limbu, Milch., *anga* Garo &c.) *Um*, *am* is also U.-H. (*men*, Burm; *ma* Nag; *amko* poss., Kiranti &c.) *Ini*, *uni* [*ni*, *ini* "this," "en" that] is an Ultraindian demonstrative, (*nī* Mon, *nīra* B., *ira* Nag., *ino* Kas. &c.) The Ho dialect in addition to *ini* uses *ayo* or *ay* as the third pronoun. This is pure Dravirian [*aye*, Tuluva, &c. See Sec. 7.] In the plural and other forms the Kol pronominal system is somewhat complex and irregular like the Naga, and the cause of the quasi-flexion is obviously an euphonic one. *Ing* or *aing*, "I," is *alling* in the dual, *alle* in the plural relative, and *abu* in the plural absolute. *Um*, "Thou," becomes *abben* in the dual and *appe* in the plural. *Ay* or *ayo*, "He," postfixes the substantival dual and plural particles, *king* and *ko*, contracting itself to *a* (aking, *ako*). When postfixes objectively to the verb, the pronouns receive further euphonic contractions and variations. *Um* becomes *me* or *m*; *alle* is contracted to *le* or *l*; *alling* to *ling*; *abben* to *ben*, *men*, *b* or *m*; *aking* to *king*; *ako* to *ho* &c. From this it may be inferred that *a*, which is prefixed to all the dual and plural pronouns, is merely a common definitive (*a* of S. Drav. &c.) used as a prefix, that *ho* is the proper plural form of the definitive or 3rd pronoun *yo*, and that *ing* or *in* is the radical dual postfix, from which comes *king* (*ko*+*ing*), they-two. It is to be remarked that the numeral *baria*, 2, is a different root.* The plurals of the other pronouns are thus radically *le* "we," † and *pe*, "you," ‡ whence *a-le-n̄g*, "we-two," *a-be-n*, "you-two." The substantive plurals are simply those of the definitive. *Seta king*, "two dogs," i. e. literally "dogs-they (or these) two"; *seta ko*, "dogs," i. e. "dogs-they (or these)". The plural inclusive is in other languages radically *we* (exclusive) + *you*, one of the elements often becoming attenuated or vanishing. It may be inferred, therefore, that the element *b* in *abu* represents *be*, you. The structural relation of the pronoun to the verb is similar to what obtains in Dhimal, but it is more complex. The agentive pronoun may be preplaced or postfixes (after the time word when it is used), or (as in Dhimal) both. *Ing kaji-tana* "I speak-do"; *kaji-tana-ing* "speak-do-I", *ing kaji-tana-ing* "I speak-do-I", i. e. "I speak." But the pronoun may also be postfixes objectively,

* *Bar* is of Mon-Anam derivation, but the Dravirian root, *ra*, *er*, *ir*, is preserved in the Uraon *en-otan* in a nasal form corresponding with the Kol dual. The Kol dialects retain Dravirian terms and roots in some of the higher digits. The dual particle may therefore be considered as the pre-Mon or Dravirian form of the numeral 2.

† *Le* is a S. Dravirian plural postfix. The Dhimal *el*, *l*, and the Mikir *li*, used with all the pronouns, is the same particle. The Mikir plural of the first person is identical with the plural relative of Ho (Mikir *ali*, Ho *alle*), both consisting of a Dravirian definitive prefixed to a Dravirian plural particle.

‡ *Be* and *pe* are merely euphonic flexions of *me*, one of the forms of the singular *um*.

preceding the tense-word, and, in some cases, incorporated with it, an idiom which is the germ of transitional agglomeratives such as occur in Australian &c, and which are so fully developed in American ideology. Aing kajiing tana "I speak-me do," i. e. "I speak to myself"; aing kaji-mi-tana, "I speak-thee-do" i. e. "I speak to thee"; aing kaji-le-tana, "I speak-us-do"; i. e. "I speak to ourselves"; aing kaji-ling-tana, "I speak to us two"; aing kaji-king-tana, "I speak to them two." In the perfect the pronoun is incorporated with the tense word. Um kaji-tanna-men, "thou speak doth—thou," i. e. "thou-speakest"; um kaji-kedia-men "Thou speak-did-thou, i. e. thou didst speak"; um kaji-kedmia, "Thou didst speak to thyself." So, ayo kaji-kedlingia, "he spoke to us-two"; ayo kaji-kedkoa, "he spoke to them." Particles or words denoting time, causation, positiveness, continuity, and intensity are immediately postfixed to the root, the pronoun (when postfixed) following, and lastly the generic tense particle, save in the case already mentioned.

The Ho differs from the northern languages not only in its greater fluency and agglutinative and inchoate flexional tendency, but in its dissyllabic character, its possession of dual and relative forms of the pronouns, in the position of the qualitative before the substantive, and in the infrequency of definitive and qualitative prefixes and postfixes. The collocation is inverse, but the object follows the verb when the agentive or nominative is an appellative. With pronominal agents the object precedes the verb, that is, comes between the pronoun and it. The verb never precedes the agentive. Reversing the Burma-Tibetan or mixed arrangement, which has hitherto prevailed, the qualitative agrees with the possessive in preceding the subject, as in Dravirian, Tartarian and Chinese.*

* Having lately received the Revd. J. Phillips' "Introduction to the Santal [or Sonthal] language," (Calcutta, 1852), I add a few notes on this dialect of Kol. The 3rd pronoun has personal and neuter forms, *huni*, *uni*, "he, she" *ona*, "it." The interrogative pronouns have three forms, a personal, an animate (human and irrational) and an inanimate, the two last being distinguished by the affixed particle. The dental possessive particle is *prefixed*, in the contracted form *t*, to the 1st. and 2d. pronouns,—*ting*, "my," *lam*, "they." In the 3rd. person *t* is prefixed to the possessive *ai* or *a*. The latter particle is evidently the definitive or 3rd. pronoun. It occurs in Ho as the agentive of that pronoun with verbs, but may there also be possessive, assertion in many crude ideologies being simply the common possessive which also serves as the generic attributive or relational form. The variation of the postfixed definitive with the sex appears not to be confined to human beings. In the possessive of nouns *r* may be used. It is followed by the pronominal postfix indicating the gender and number of the subject of possession. Nouns of kindred generally postfix the pronoun, thus reversing the ordinary collocation of the possessive. Agentive nouns are formed by reduplicating the first syllable of the root and postfixing the number, of the agent, *in* being used for the singular. When the root begins with a vowel, *o* is postfixed in place of doubling the first syllable. The root may be used either assertively or nominally as in all the Dravirian languages. In the latter case the definitive *a* is sometimes postfixed. Transitive verbs reflect postfixually the gender, number and person of the object. With reference to the union between the pronoun and root to form assertives, Mr Phillips remarks "From the foregoing account of the Santal verb, it will readily be seen that, by a kind of dovetailing

Gond.

The Gond ideology has been partially investigated by Dr. Manger and Mr W. Elliot (J. A. S., XVI, 286, 1140). The latter has compared the language with the Dravirian and shewn that it resembles it in grammatical construction and that the larger portion of the glossary is also Dravirian. Dr Manger's notices relate to the dialect spoken in the district of Seoni in Chuparah. The published vocabularies are, a short one for Gawil by Dr Voysey, a very full one for the same locality by Dr. Bradley (Bombay Geogr. J. VII, 181, 215) and another for Seoni by Dr Manger.

The ancient Indian or Dravirian formation has hitherto been struggling, as it were, to cast off the Tibeto-Ultrindian and U.-Gangetic taint. In the Gond we find the old formation nearly pure. The phonology and ideology belong to the South, and the latter exhibits in the pronoun some flexional traits which give assurance that we have fairly entered on a widely different formation from the Burma-Tibetan or Mon-Anam. The Gond may be described generally as possessing a harsher and more Dravirian form of the Kol phonology, combined with a more purely Dravirian ideology and glossary. It is somewhat more consonantal than the Tamil, but much less so than the Tuda. As in all the Vindyan and Dravirian languages, the liquids are greatly affected, and

and splicing of the *pronouns* with the *verb*, its forms may be multiplied to an almost unlimited extent, affording great exactness, force, beauty and copiousness of expression. Few languages, probably, offer greater facilities for richness and beauty of expression, with so few intricacies, as the Santal" (p. 51), a remark it may be added, almost invariably made by those cultivators of single *pronominalising* languages, whose attention has not been drawn to the immense spread of this mode of rendering crude roots assertive or verbal. In truth the only complete exceptions to its prevalence, open or disguised, are to be found in the crudest tonic languages, and, even in these, pronouns and definitives already announce the all important part they are destined to play in all harmonic or phonetically developed tongues.

The collocation is inversive. Qualificatives generally precede the nouns to which they relate. When the qualitative follows the noun, it becomes assertive or verbal and reflects its gender, number and person like other roots used assertively. With pronominalised transitive roots (i. e. so called transitive verbs) the collocation is, 1st the transitive root, 2nd the tense particle, 3rd the objective or dative, and 4th the agentive or nominative. When the agentive is an appellative, it usually begins the sentence, as in Ho. In that dialect according to Captain Tickell, when the agentive is a pronoun the objective noun takes the first place in the sentence, but when the agentive is an appellative the collocation is 1st the agentive, 2nd the objective, 3rd the verb, with the dative (if it occurs) immediately preceding or following it, e. g. *ian hon do chonli seta enadya* "my son rice dog gave." In Sonthal "as a general rule, the number of the sentence which immediately precedes the principal verb (it may be the nominative, the instrumental, the dative, the accusative, the ablative, the locative, a verb in the infinitive mood, or an adverb) receives the pronominal, inflection indicative of the number and person of the nominative or agent; and in this case the final syllable of the verb may be optionally omitted," (Phillips). In Sonthal, as in Ho, it may be concluded that words being crudes may be used either nominally or assertively, and that the reflection by a subordinate word of the postfix of the principal is the chief means employed to indicate relationship.

amongst the finals they predominate over all others, including the nasals. They form about 20 per cent, or about the same proportion as in the Tamil and Tuda. Like the Tuda it has final *k*, *t*, *d*, *s*, which are wanting in Tamil and Malayalam. Kol has all these save *s*. It has not the tendency to sonant finals found in Kol. On the contrary, *m*, *g*, and *b* are wanting and *d* is rare. The following are the finals,—*n* 3; *k* 4, *nk* 1; *t* 1, *d* 1, *l* 7, *r* 15; *s* 4; *p* 1. In the great predominance of the vibratory *r* over the smooth *l* it resembles Tuda and differs from Tamil. It possesses consonantal combinations similar to the Kol and the purer Dravirian languages, —*nk*, *rg*, *kr*, &c.,—some of them, such as *npt*, being harsher than in Kol, Telugu and Karnataka. The sibilo-aspirate combinations of the southern Dravirian (Tuda, Tamil) are absent as in Kol. The structure is harmonic and dissyllabic, as in Kol and the purer Dravirian languages.

It has no definitives, save a plural postfix —*nk*, *k*, *g*, and occasionally one of the Dravirian substantive postfixes *ki*, *h*, *iya*, *al*, &c. As in Kol, the word for boy ends in *a* and that for girl in *i*, (*perga*, *pergi*). The possessive postfixes *na*, *da*, and the objective *un*, are Dravirian. The instrumental prefixes *s* to *un*. Where the substantive ends, and the postfix begins, in a vowel, the consonant *t* is euphonically interposed. The directive itself is sometimes elided so as to leave *t* alone to represent it. It is not improbable, however, that the *t* (dative as well as objective) is related to the dative *ta* of Singhalese and the Marathi obj. and dat. *te*.

The pronouns are Dravirian. They display a considerable degree of euphonic mutability in their union with directives &c, and also some decided flexional traits. The roots of the true pronouns are *na*, "I," *ni* "thou," which thus appear as flexional variations of one root, although analogy would suggest, what further comparison will prove, that the common element *n* is primarily a definitive prefix, the ultimate roots being *a* and *i*, or words of which they are contractions. *K* is suffixed to *na* and *ni* save in the possessive. The agentive of the second person has a different root from the other cases, and the agentive of the first person has also a distinct form although, *nak* is also used. These roots (or compounds) are *nunna*, "I" and *imma*, "Thou". Another flexional trait is presented by the plural of *nak*, which is not *nank*, *nat* or any other variation of the plural postfix but *mak*, the initial being evidently the plural form of the definitive initial *n*. *Nunna*, "Thou," takes *t*, a variation of the regular plural particle, but in the oblique cases *m* replaces *n* as in the 1st person, a further proof that *imma* and *nunna* are extraneous engraftments, belonging radically to a distinct pronominal system. In the possessive the final *k* is rejected, "my" being *noua*, "our" *mouan*, "thy" *niwa*, "your" *niwan*. Here we have another curious quasi-flexional irregularity. The regular possessives would be *nak-na*, *mak-na*, *nik-na*, *mik-na*. The plurals have the full form of the

possessive postfix in the inverted form *an*, the *n* being merely euphonic. The singulars appear to be contractions of this by eliding *n*. The *a* thus left, it may be remarked, is the Kol possessive. The third person is more regular, but it has some peculiarities. The full form is *wur*. In the oblique cases of the singular the *r* is omitted. In those of the plural it is retained, while the plural postfix is itself dropped,—S. *wur*, *wunna*, *wunk*, *wunksun*; P. *wurg*, *wurran*, *wurrun*, *wurrunsun*.

The Gond is equally arbitrary in its repetition of the pronoun after the verb. It is postfixed in a contracted form in the perfect and future, but not in the present. What is more curious, the preplaced agentive itself substitutes final *r* in the plural for its proper finals. *Mah* becomes *mar*, and *imat* becomes *imar*. The tense particle precedes the postfixed pronoun. It is *t* in the perfect and *ik* in the future [in the 3d person *an*].

	Perfect	Future
S.	1 <i>nunna wunk-t-an</i>	1 <i>nunna wunk-ik-a</i>
	2 <i>imma wunkti</i>	2 <i>imma wunkiki</i>
	3 <i>wur wunktur</i>	3 <i>wur wunkanur</i>
P.	1 <i>mar wunktum</i>	1 <i>mar wunkikum</i>
	2 <i>imar wunktir</i>	2 <i>imar wunkikir</i>
	3 <i>wurg wunkturg</i>	3 <i>wurg wunkanurg</i>

It is not said that the pronoun may also be objectively postfixed as in Kol. No transitive, intransitive and possessive particles or flexions have been observed. It has participial infinitive and tense postfixes. The collocation is purely inversive or Dravirian and Sythic, the qualitative preceding the substantive and the object the verb. The numerals are Dravirian.

The Khond of Gomsur appears to be merely a dialect of Ghond. Vocabularies by Mr. Stevenson and Dr. Maxwell have been published by Mr. Taylor (Madras J. VI, 17,) who has shewn that they have a large Dravirian element. From the structure of the words, the pronouns, their agentive postfixal forms and other ideomatic traits that can be ascertained from the few short sentences given in the vocabulary, it is evident that the language belongs to the Dravirian family, like the Gawil Ghond. The pronouns are Dravirian,—*anu* "I," *amu* "we," which preserve the roots *an*, *am* free from the prefix *n*, as in the ancient Karnataka (*an*, *am*). So *inu* (Kar *ninu*) "thou." "You" is *mi* (Telugu *midi*) "He" is *yanjhu* in which the common pron. postf. *du* appears in *jhu*, (Kar *avanu*, Tel *vadu*). "They" is *iru* or *eru* in the postfixal form (Drav). The pronouns appear to be repeated after the verb, but, as in the Gawil dialect, not consistently. *Anu idde vai*, "I am coming"; *eru vadu, yanjhu vaimunni*; *amu vanum*, "we are coming"; *vaimanenju*, "They are coming."

The Vindyan languages, and particularly the Gond, have a closer agreement with the Karnataka and Tuluva, and even with

the Kodagu and Todava, than with the adjacent Telugu. This is seen in the forms of many common Dravirian roots and particles. Gond has also some special affinities with Ancient Tamil. It is probable that the Telugu and Maratha have spread inland from the east and west into the upper basin of the Godavery and thus cut off the ancient connection between the Gond and the Karnataka.

Sec. 7. SOUTH DRAVIRIAN LANGUAGES

Throughout this paper I assume that the reader is acquainted with the geographical limits of the nations and tribes speaking the various languages reviewed, so far at least as they are described in the text book of the English ethnologists, Prichard's Researches. His section on the Dravirian group is somewhat meagre. The southern extremity of the Peninsula, from Ganjam on the east coast (about 19° N. L.) to Gokarnam (about 15° N. L.) comprises the South Dravirian province. Here the civilised Dravirians still occupy the whole breadth of the Peninsula, while to the north their rude and mixed kindred are confined, save at the S. E. point, to the inland and hilly tract of Gondwana. The position of the principal mountain chain has, to a considerable extent, affected the range of the different dialects of the south. The narrow belt between the Western Ghauts and the Arabian Sea is possessed by two nations speaking distinct dialects, the Tuluva current in a small territory on the north where the Dravirian gives place to the Konkani branch of Marathi, and the Malayalam which prevails throughout the rest of the belt to Cape Comorin. The main portion of the South Dravirian land is occupied by three populous nations speaking as many dialects. On the east coast the Tamil prevails from Cape Comorin to Pulicat, a little to the north of Madras. Towards the south it advances far into the Western Ghauts, on the western side of which it is continuous with the Malayalam and interpenetrates it. Further north it occupies a broad belt, the inner limit of which, where it meets the Karnataka, appears to coincide nearly with the Eastern Ghauts. The Telinga or Kalinga is current over a much larger and wider territory extending from Pulicat to Ganjam along the coast, while inland it comprises the lower basins of the Godavery and Kistna and reaches the centre of the Peninsula, being thus in contact with the wide southern borders of Gondwana on the N., with the Marathi on the N. W., on the W. and S. W. with the Karnataka along nearly one half of its inland boundary, and on the extreme S. with the Tamil. The Karnataka is the vernacular of a still larger territory. To the south it comprises the table land between the Eastern and Western Ghauts, having the Tamil on the one side and the Malayalam and Tuluva on the other. Beyond this line to the north it embraces the upper basin of the Kistna, having the Telinga on the N. E., and the Marathi on the N. and W. (Kon-

kani). Besides these five dialects others are preserved by some small tribes of the Western Ghats towards the northern extremity of the Malayalam belt. Amongst the tribes of the Nilgiri hills the Toda speak a well marked dialect having special affinities with the Tamil, and the Baudagar of the same hills have also some dialectic peculiarities. Further north the Koorg mountaineers have their own dialect, the Kodagu. The insular languages of the S. Indian province, or those of Ceylon, the Laccadives and the Maldives, also belong to the Dravirian family. The closely connected Tamil and Malayalam of the south of which *Todara* and *Kodagu* may be considered as sub-dialects, the *Telinga* of the east, and the central *Karnataka*, appear to have exterminated or absorbed the numerous continental dialects, of the former existence of which the physical evidence of a multitude of distinct tribes having been scattered over Southern India, in its barbarous era, leaves no doubt. That the Dravirian race did not bring with it into India the civilisation which the present great southern nations possess, as the Arians certainly did theirs, appears to be little questionable when we consider the antique character and affinities of the dialects of the *Male*, *Oronds*, *Khonds*, and *Todas*, the very archaic and barbarous character of many of the customs of the widely separated tribes which speak them, and, above all, the nature of the relationship of these dialects to those of the civilised nations, which is inconsistent with the hypothesis that the former originated in the metamorphosis of non-Dravirian dialects of rude aboriginal tribes, through the influence of the intrusive and dominant race. The known ethnic facts of all kinds lead us directly to the conclusion that the uncivilised Dravirian-speaking tribes are no other than genuine Dravirians who have, in great measure, escaped the culture which the more exposed tribes have received, and thus preserve a condition of the race certainly not more barbarous than that which characterised it when it first entered.

The languages or dialects of the southern group are distinguished from the *Gond* and *Kol* by their much greater culture and power. In phonology and in ideology they manifest a high degree of mental energy and vitality, and, amongst the languages of the same widely spread class, approach the nearest in culture to the *Osmanli*. But all their fundamental traits are similar to those of the less advanced languages of this alliance. They are in general vocalic, harmonic, fluent, euphonic and elliptic, but the southern and northern members exhibit a considerable phonetic contrast, for while the *Telugu* is clear, remarkably sweet, sonorous, and rhythmical,—being indeed equally musical with the *Bugis* and its African allies,—the vulgar *Tamil* is barbarous in its utterance, being hurried, smothered in the back of the mouth, jerked through the closed or hardly opened teeth, without musical rhythm, and possessing a frequent and

disagreeable *sh*, a harsh *r*, a strong nasal *u*, and a tendency to short vowels. It has all the characteristics of a comparatively rude and primitive phonology and presents the same contrast to the Telugu that the Hottentot does to the Kosah. As the same sounds are found in a softer form in all the languages, it may be presumed that the less emasculated Tamil is a better representative of the original Dravirian phonology than the Telugu and Karnataka.

The phonetic elements of the Dravirian formation are numerous, and some of them have a somewhat African and Australian character. Most of the dentals, liquids and sibilants are peculiar. It has a cerebral series, in which *l* and *r* are more cerebral than *d*, *t*, and *n*, that is, the tip of the tongue is raised higher, and strikes the roof of the mouth further back, than in forming the other sounds of this series. In the proper dentals the oral valve is not closed by the tongue being pressed against the back of the teeth or gums, but by the edge of the teeth being brought in contact with the tongue which is thrust between them. A peculiar aspirated sibilant is formed by letting the tip of the tongue fall below the lower teeth. One of the cerebrals is intermediate between *l* and *r*. There is also a strong vibratory *r* and a soft vocal one. Dravirian possesses both the French liquid-nasal *gn* of Tibetan and Burman and a more purely liquid *ni*. An obscure or indistinct nasal *n* occurs amongst the finals. There is also a nasal *u*, strong in Tamil, soft in the southern Telugu and absent in the northern. The sounds *ch* and *j* are respectively commutable into *ts* and *dz*. The vowels are also numerous. The Telugu alphabet contains 81 symbols, simple and complex, but the elementary native sounds are considered to be 38. Some grammarians state that there is no accent, but the vowels have short, long, and prolonged or continuous sounds, and, if I may trust my own ear, accent is fully developed, at least in Telugu. In Tamil the ordinary elocution is so emphatic, that it may be said to be all accent. Phonetic unions and euphonic adaptations, including harmonic changes of the vowels, are carried to a great extent in all the Dravirian dialects. Hence the spoken language has a highly polysyllabic and agglutinative character. A long Tamil sentence is violently forced and hurried out of the mouth, without pause or check, and without drawing the breath oftener than is absolutely necessary. The Telugu rolls on mellifluously and sonorously, with the words euphonicallly linked. The harmonic character of the Dravirian phonology is hostile to vocalic compounds like the Ultraiadian and Gangetic. The contact of vowels is prevented by elision or by the interposition of a consonant. Euphonic changes, such as the reduplication of the initial consonant when the preceding word ends in a vowel, often serve to mark ideologic changes. The relation between the possessor and the possessed is indicated by a change in the final letter or syllable of the possessive. The

general character of the phonology is similar to that of the Gond. The great addition to liquid sounds, and particularly to *l* and *r*, is the distinguishing characteristic of the Dravirian phonetic formation, as the tendency to nasals is of the Ultraiidian. There is also a considerable aspirate tendency, which shews itself in the frequent occurrence of the sonants *v* and *ch* in the northern or more refined languages and of *v*, *sh* and *zh*, in the southern group. Combination of liquids and nasals with other sounds are common in some dialects. Todava has *rt*, *rg*, *rb*, *nh*, *lch*, *st*. The collocation of consonants is generally of liquids or nasals with allied sounds, as the labial nasal with labials, *mb*, *mp*, the dental nasal with dentals, *nd*, *nt*, *nr*, *nch*, *rch*. *St*, *ds*, *dch*, *tl*, *lp*, *lv*, *lkn* and other similar conjunctions occur. The languages vary considerably in their vocalic tendency. The two cultivated northern tongues, Telugu and Karnataka, are almost purely vocalic in their finals. The Toda, on the other hand, is highly consonantal, having about 75 per cent of final consonants and these very varied, although liquids and nasals predominate (*r* 10, *l* 7; *n* 14, *m* 3; *k* 2; *l*, *rg* 1; *t* 6, *rt* 1, *d* 8; *p* 2, *b* 1; *s* 1, *lsh* 1, *j* 1 in 80 words.) The most southern language, Tamil, has about 30 per cent of terminal consonants, almost wholly liquids and nasals (*l* 14, *r* 3; *n* 7, *m* 6.) The cognate Malayalam is somewhat more vocalic (*l* 4, *r* 1, *n* 5, *m* 6, *v* 1.)

Amongst these finals the liquids greatly exceed any other class; the soft *l* predominates in the more polished Tamil and Malayalam, and *r* in the ruder Toda, as in Gond; the nasal *ng* is absent; the sonants *m* and *d* are affected, while *g* is avoided; and labials and sibilants are very rare. In all these characters the Gond agrees with the southern languages, and as it is somewhat more consonantal than Tamil, from which and the still more consonantal Toda it is separated by an almost purely vocalic band, it may be concluded that the Toda represents the more archaic condition of the phonology, and that it prevailed over all the Dravirian region at one time. Some internal or external cause has evolved a strong vocalic tendency, which has deeply affected the middle region, but has made less progress at the extremities.

Structurally the general character of the formation is dissyllabic and polysyllabic, but, like the other members of the Ugro-Australian alliance, it is based on a monosyllabic one.

Although the harmonic phonology produces many flexional and quasiflexional traits, the ideology is essentially crude. Roots retain a substantival or qualitative character even when used in verb combinations, and this allows a freedom and directness of expression and a license of agglomeration which languages possessed of true verbs have necessarily lost. Dravirian has therefore more of the curtness of the cruder formations than of the circumlocution of the abstract and flexional ones. Thus roots are

not only made assertive or verbal by pronominal affixes, but any noun may be directly prefixed to a pronoun as its qualitative, with or without an assertive force as the sense requires, all qualitives, and words capable of being used as such, being euphonically prefixed to the words they qualify. The whole character of the formation is that of a crude one like the Burmah-Tibetan, changed in its phonology only. Euphonic cohesion of words has come in aid of mere collocation.

The prefixes and postfixes being separated from substantives and qualitives, the verbs reduced to their roots, and polysyllabic compounds decomposed, the Dravirian languages become almost purely monosyllabic.

Postplaced particles are much used, as in Burman and most other languages of the same great class. They serve to convert one ideologic form of a word into another, and to express various modifications and combinations of the same idea. Thus, *ang-garam* "pride," *anggarin*, "a proud man," *anggarī* "a proud woman"; *nadakuna*, walking, *nadakunawin* he who walks (walker); *nadakado* "not walking," *nadakadowin*, he who is not walking. The ordinary collocation is 1st agent, 2nd the object, 3d subordinate terms, and 4th, the verb or assertive. The last reflects the gender, number and person of the agentive.

The collocation is purely inverse, and, as in other inverse languages, the participial form of speech is much used. Long sentences are chiefly constructed by it, as in the Scythic languages.

Glossarially the Dravirian tongues are rich. The agglomerative and cohesive phonology gives much facility of expression. Words may thus be combined at pleasure, the first being qualitative or possessive, according to the general rule. The numerous generic terms and particles which are used as formative postfixes confer great glossarial power. In their vocabularies the Dravirian languages, like most others in the world save the Iranian, are exceedingly discriminative in material, and very much the reverse in abstract, nomenclature. Thus, in Tamil, the fruit of trees is called *pinchu* when the flower has hardly fallen, *kai* when it has become large but is still unripe, *parām* or *kāni* when it is ripe. Words and particles are postfixed to express the age and sex of animate beings, and there is a curious classification of animals, the postfix varying with the class. Thus, in Tamil, the young of human beings take the diminutive terms *kurānde*, *pillei* (which last is also used for palm trees); birds, mice, fishes, insects, *tinnām pillei*, *kunchu*; quadrupeds serpents, *kutti* (except mice, rats); cows, buffaloes, *kāntu*, *kāntu-kutti*; horses and asses, *kutti* or *mari*; harts, camels, elephants, *kutti* or *kāntu*. The generic definitive for human beings appears to be *va* or *pa*, probably radically male or father as in Karnataka (*appa*), in the Gangetic, Tibetan and many other formations, but as it is used

also for mother (Karn. Kurg. *avva*, Tuluva, *appe*) it must be received as generically "parent" and "man" (*homo*) in Dravirian. The postfix *n* (sometimes varied to *m*) makes it masculine, and *l* feminine.* *Van* and *valare* are used in forming pronouns, and *an*, *al* as gentile postfixes, e. g. Tanjauran a Tanjaur man, Tanjaural a Tanjaur woman. *N*, a contraction of *an*, is used in Tamil as a masculine prefix for human beings. *Pā* is used for females. They may also be used alone or with *pillei* postfixed. In Telugu the prefixual words are *potu m.*, *pinti f.* The words of gender for animals vary with different classes. In Tamil birds take *savāl m.*, *pattei f.*, pref. or postf.; oxen, when young, *kalei m.*, *kidari f.*; when full grown, *irutha m.*, *pāshu f.* Some animals have specific words for the two sexes. For those which have not, the feminine gender is marked by *pattei* pref. or postf., the masc. of dogs, cats, foxes &c., by *kaduvīn*, deer by *kalei*, and sheep and goats by *kidai*.

Definitives are used. They occur in the archaic basis of the formation as elements in pronouns, in the variations of the third person according to the gender, in the nominative or agentive postfixes which vary with the gender to a certain extent, and as postfixes to the numerals. Thus in Telugu numerous words that terminate in *du* are masculine and many that terminate in *nu* or *am*, varied to *bu*, *ru*, *va*, *vei*, *v*, *pu*, *p*, &c, are neuter and sometimes feminine. *Du* is the masculine postfix in the 3rd pronoun, *vadu* (*va* being the generic human definitive) and in the masc. pref. *potu*, while *me* is the feminine particle. In all the northern languages *du*, *tu*, *nu*, *lu*, &c is a common postfix. In Malayalam, words that end in *yīn* are generally masculine, those in *a*, *i*, *ī* are generally feminine, and those in *um* or *am* (*mu* of the vocalic Telugu) are always neuter. Similar terminals occur in the cognate Tamil and with the same radical power. In all the languages consonants are interposed between the root and the postfix when euphony requires it, e. g. *am* becomes *nam*, *ram*, *dam*, *tam* &c. From the great prevalence of a few other euphonically variable terminals it is probable that some of them also are concentered definitives. In some words the postfixes are double, a phenomenon that must be explained by the first or original postfix having become concentered or merged in the root. This may have often happened when a root having an affixed definitive was transferred, as an integral word, from one dialect to another which affected a different definitive. Thus the root *to* carried from a dialect using the postfix *ma*, *ba*, *pa*, *va* &c, to one using *lu*, *du*, *nu*, &c. might assume the form *tovalu*.

* This is a Caucasian trait,—Awari, *emen*, Father, *evel* Mother; Chunsag, *emen*, *ebel*; Andi, *ima*, *ifa*. In Ugrian the distinction has been lost, e. g. in Ostiak *evem*, *evel* are both "Mother", a different word being used for "Father,"—*acha*, *esem*,—corresponding with the Caucasian *eshu* &c. "man".

Du, ru, da, la, na, di, ti, ji, &c. is a definitive occurring as a postfix to numerals, as a prefix and postfix in some of the forms of the pronouns, and in directives. It appears to be primarily definitive but is generally possessive, the Dravirian, like most other families, thus furnishing a proof that directives, possessives, &c. were originally mere definitives, as were the pronouns themselves. The most common form of this definitive is also the 3rd pronoun (neuter), with a prefix added (*adu, ada, adi*)

But a glossarial analysis discloses a still more important fact. The Dravirian dialects possess, in a concentered state, some of the definitive prefixes that distinguish many of the Gangetic and Ultrindian languages. The most common is *pa*. *Ka* is less frequent. Both undergo euphonic changes as in the Gangetic group. They sometimes take a final consonant in obedience to the rule of Dravirian phonology which prevents the contact of vowels. *Ka* is occasionally varied to *ko, hu, ta, tu* &c. *Pa* becomes *ma, va, na* (Karn.) &c. Purely vocalic prefixes also occur and in some cases these are obviously caused by the loss of initial consonants, which the vocables preserve in other dialects. The first consonants of roots are also liable to disappear, the rapid and agglomerative elocution being favourable to euphonic abrasions as well as accretions. As similar prefixes are found in some of the northern members of the Postpositional Alliance, they must be considered as belonging to the oldest form of the Ugro-Australian, or to an older formation, and as tending to support the conclusion that the primary basis of this great alliance was a monosyllabic and prepositional formation similar to the Chino-Ultrindian.

Qualitives have also possessive postfixes. *Iya* is the most common in Ancient Tamil, and it also occurs in the Modern and in Malayalam. The same particle is found in the modern possessive *udaya* in combination with the other possessive. But the most prevalent qualitative postfix is *du, tu, thu, da, ta, thi, athi*, which is also the possessive of pronouns. The other postfixes appear to be only variations of the last, *ra, la, na* being referable to *da*, and, *cha, che* to *ta*. Kurgi adds a final consonant, *ta, da* becoming *tad tat, dad*. *Ga, ha* occur rarely and are probably of northern origin. *Pa, pu* are also found in a few words.

It is probable that the two possessives *ya* and *na* were originally definitives appropriated to distinct classes of substantives. In Tamil, words which have the postfix *m* (that is, the inanimate or neuter definitive) reject it when used as qualitives and sometimes replace it by *itu*. Words ending in *mei*, which are generally feminine, substitute *iya*, and those ending in *tu, du, ru*, double the consonant. Both *m* and *ei* are objective particles.

With substantives the possessive *na* has two forms. The Toda, Karnataka and Gond have *na*. This is also varied to *da, d* in

Karnataka and Gond, and to *a* in Kol. The other form affects *i*, in place of *a*. It is *in*, or *yin*, in Tamil; *ni*, *di*, in the vocalic Telugu; *indé*, *ude*, in Malayalam, (but the full form *in*, *yin*, occurs in the instrumental). The second possessive particle *ya*, is used in Tuluva (*ya*, *a*) and it enters into the ordinary possessives of Telugu (*yoka*), and Tamil (*daya*,—euphonically *udaya*,—postfixed to *in*, (*yin*, *y*). Both appear to be double forms. *Ya*, *yo*, is not only preserved in Tuluva but is the possessive postfix of qualitives in Ancient Tamil (*iya*), *da*, *de*, being the common possessive. Most formations of any antiquity present similar dialectic variations. As dialects lose the generic sense of a particle, or restrict it to particular offices, they form compounds and adopt other particles and words, as substitutes for it. The Telugu *yoka*, is found in Mikir as the dative postfix, *ayok*, *yok*. The form in *in*, *ni*, is preserved in the Gangetic languages,—Bodo, Garo, Limbu, Dhimal (*ng*) and that in *na*, *da*, may be the Murmi and Gurung *la*, but the Tibetan generic directive *la*, *na*, is the same particle.

The possessive is used in the oblique cases by itself or in combination with directives, as happens in many other crude languages, shewing that the directives are radically substantives. The objective appears to be radically *nu* or *un*, which is probably a variation of the possessive. In Telugu *ni*, identical with the possessive, is the singular form in the 1st declension. *Nu* is the objective in the 3rd or common declension, in the 2nd (preceded by its distinctive prefix *u*) and in the plural of the 1st. It occurs in Tuluva preceded by the possessive *ya*, and in Gond with or without *t* (*-tun*, *-un*, *-t*). The Dhimal *eng* is probably a variation of *un*, *in*. In Toda the objective is *ma* (Scythico-Dravirian, Iranian &c.) with the poss. *na* prefixed. It occurs also in the Malayalam *yem*. It is used in Miri with pronouns (*-m*) The Tamil has the possessive *ei*, and Malayalam *ye* which occurs also in the Tuluva objective *ya-nnu*, and instrumental *yin-da*. The dative is *ka*, *ku*, (Tamil *aku*, Telugu *ku*, Mal. *ki*, Tul. *ge*, Toda *nka*). In the north it occurs in Uraon—*gai*, Changlo—*ga*, Bodo—*ha*, Mikir—*yok* (Telugu *yo-ka* poss.); Asam—*ak*, Lepcha—*ka*, Magar—*ki* Sunwar—*kali*, Bengali—*ke*, Hindi—*ko* &c.

The instrumental varies. The most common form is in *t*, *d* [Samoide, Fin, Mordv.]—Tel. *ta*, *to*, *cheta*; Tul. *da* Toda *ta* with the poss. prefixed; Kol. *te*. In the north it occurs in Bengali *te*, Dhimal *dong* [Turkish *ten*, *den*, *dan*.] Another Dravirian particle is *na*, *la*, *al* (Tel. *na*, *wala*; Tam. *al*, or with the poss. pref. *inal*; Mal. *al*.) It appears to be the form of the possessive that is preserved in Todava, Karnataka and Gond *na da*.

The ex-transitive ("from") is the possessive combined with another root (Tam. *ninra*, *iran*, A. T. *il*, Mal. *ninna*, Kar. *inda* (the Tul. poss.) Tel. *nunchi*. (Lepcha *nan*, Murmi *yanche*, Mag. in Tib. *ne*, *dine* &c.)

The plural postfix is *kāl*, taking the Tamil as the full form. In Tuluva it becomes *kulu*, *gal*; in Malayalam *kāl*, *ṅāl*, *kan*; in Gond it is contracted to *nh*, and in Telugu to *lu*, *la*. In the north it is preserved in Dhimal, *galai*, and Naga, *khaḷa*. Malayalam has another postfix which appears to be formed by replacing the *k* of the common postfix by *m*, the pronominal plural element. *Mar* thus formed (sometimes euphonicly varied to *ir*, *yir*) is found under the form *nar* in Kol, which is Turkish (*nar*,) and Mongol (*lar*.) If therefore *mar* be the original form and it is related to *kāl*, it had probably an archaic extra-Indian origin. The plural elements *r*, *l* occur in pronominal plurals under the forms *r*, *ir*, *ru*, *lu*, *al*, *ṅāl* &c.

The pronominal system is developed and irregular. It has flexional traits, and the plural of the first person has absolute and relative (inclusive and exclusive) forms. The principal roots are "I" *en*, *ne*, *an*, *na*; "Thou" *ni*; "He," *ta*, *du* &c.; and *m* plural. *An*, *na*, "I," is generally reduplicated.—Tel. *nenu*, Kar. *nanu*, Tam. *nan*, Mal. *nyan*, Tul. *yanu*. In Toda and Anc. Karn. the root alone is used, *an*. (Gond *nunna*, Khond *anu*, Kol. *ing*, *aing*). "Thou" is *nivu*, Tel. *ninu*, *nin*, Kar. *ni* Tam., Mal., Tod. (Khond *inu*; the Gond and Kol are Ultrai Indian, *imma*, *um*). The different languages exhibit the usual dialectic phenomena occasioned by variations in old forms and substitutions of new ones. Thus *en* seems to be the radical form of the 1st person. It is preserved bare in Tuluva, and recurs regularly in the plural and possessives. In Telugu it occurs in the first person, *ne*, and the plural, *me*, is regularly formed from it. It is found in Toda with a prefix, *one*. In Tamil and Malayalam and in Karnataka it has been converted into *an*, *na*, (with prefixes and postfixes,—*yan*, *nan*, *nanu*), but it is preserved in the possessive of Tamil and Malayalam, *exadu*, *enre* &c. Similar dialectic variations occur in the plurals, possessives &c. The regular plural is formed by changing the singular consonant into *m*. Tel. "I," *nenu*, "We" *memu*; "Thou" *nivu*, "You" *niru* (*ru* is also plural). Anc. Kar. and Tod. "I" *an*, "We" *am*; "Thou" A. K. *nin*, "You" *nim*, Tod. S. *ni*, P. *nam*, in which *m* is postfixed. Tamil, "I" *nan*, "We" (inclusive) *nam*; Mal. "I" *nyan*, "We" (incl.) *nam* (Gond "I" *nzh*, "We" *mak*.) In the exclusive forms the substantive plural postfixes are used, and they are also alone used in the 2nd person in the dialects which do not take *m*. Tam. *nan* "I," *ningal* "We," (exc.) *ni* "Thou," *ningal* "You". Mal. *nyan* "I," *ningal* "We"; *ni* "Thou," *ning* "l" "You." Tul. *yanu* "I," *entulu*, "We"; *i* "Thou," *inukulu* "You". Karnataka has *ninu* "Thou," *nieu*, "You," *niru* being "Thou" in Telugu.

The pronouns take the common generic possessive and directive postfixes. The compound and probably modern possessives of Tamil and Telugu (*udaya*, *yokha*) may be used with the pronouns,

which in these, as in the other, dialects, also take the primitive possessive *du* &c (Tam. *du*, Mal. *de*, *re*, *ra*, Tul. *nau*, an amplification of the substantive form *no*, Kar. *du*, *na*, Tel. *di*). In the possessive of the first person there is also a flexion of the root. Thus in Telugu *ne-nu* "I," *na* or *nayoka*, "my"; *memu* *We*, *ma* or *mayoka* "our". In the objective, this possessive flexion is preserved. Thus, *memu* "I," ag.; *mamu* "me," obj. In Telugu the agentive is generally used for the objective with inanimate things.

The third pronoun must be considered separately. It has masculine, feminine and neuter forms. But in reality there is only one root, *a*, which is probably a contraction of some fuller archaic monosyllable.* It occurs by itself in the Karnataka *a*, "that". By adding different definitive postfixes to this particle, compound pronouns are formed. The generic definitive *ta*, *da*, *du* &c forms the neuter form, *ata*, *ita* Toda; *athu* Tam.; *ada* Mal.; *adu* Kar.; *adi* Telug. [*av* Tul.]. The definitives for human beings, *van* m. *val* f., form the m. and f. pronoun, *avan*, *aval* &c. save in Telugu and Tuluva. In Tel. *vadu* is "He" and *ame* "She"; in Tul. *aye* is "He". In the common plural the *n*, *l* and *d* of the singular become *r*. The proximate demonstrative is a curious idiomatic term. In general it is the masculine definitive with the possessive postfixed. "This" *avanudaya* Tam. (literally, "He-of"). That *van* was originally a generic def. appears from the Tam. *i-van* "here," *a-van* "there." So Mal; *avande* Tel. *vani*. (i. e. *van* + *ni* the pronominal possessive) Tul. *ayino* (i. e. *Aye* "he" + *no*, the poss. Karn. *avana* (i. e. *a-van* + *na* the poss.) The remote demonstrative is the same as the third personal pronoun neuter, i. e. there is no distinction between "it" and "that". The correlative locative elements are *i*, the proximate, and *a*, the remote. The interrogative prefix is *e* which occurs in Where, How, Why, Which, What. In the personal "Who," and in a few forms of some of the other interrogatives *ya* replaces *e*. These particles are prefixed to definitives and absolute locative terms (i. e. words or particles signifying "place" generally). Tam. *A. ivan*, "Here", *avan* "There"; *evan* "which," (*van* being used as in "This," "That") M. Tamil *ingu*, *angu*, *engu*; Mal. *i-vi-de*, *a-vi-de*, *e-vi-de*; Tul. *inchi*, *anchi*; Kar. *illi*, *alli*, *elli*; Tel. *ikkada*, *akkada*, *ekkada*. It is needless to add the interrogatives as they are formed in the same way and abundant illustration has already been given of that generic power of the definitives which allows of their being employed as demonstratives, personatives, locatives, possessives, directives &c.

In all the southern languages, save the Malayalam, the pronoun is postfixed in a contracted form to the verb, as in the following examples. Some of the postfixes are also made honorific by slight euphonic changes.

* It is to be remarked, however, that in the form, *a*, it prevails widely in other formations—Asiatic, African, Aonesian &c—chiefly as a prefixal definitive.

	<i>Telugu</i>		<i>Tamil</i>
S. 1st	nenu	vagu-ta-nu	S. 1st sei-kir-an
2nd	niru	vagu-ta-vu	sei-kir-ai
3rd	{ m. vadu f. adi n. ithi	{ vagu-ta-du vagu-ta-di vagu-ta-thi	3rd { sei-kir-an sei-kir-al sei-kir-idu
P. 1st	memu	vagu-ta-mu	P. 1st sei-kir-om
2nd	miru	vagu-ta-ru	2d sei-kir-irhal
3rd	waru	vagu-ta-ru	3d { m. f. sei-kir-ark il n. sei-kir-ada

It will be remarked that some of the postfixes are echoes not of the pronominal roots but of the accessory definitives, singular or plural. This is an example of the mode in which the connection between the personal flexions of verbs and the pronouns in which they originated may be disguised and lost.

The tense postfixes vary, as in most crude families. The present is sometimes used for the future. The pure assertive (present) is *ta*, Telugu (? the 3rd pronoun) in which one of the elements of the Kol *tana*, appears. The Miri *da* is probably the same particle, and the Singpho *dai* and Burman *tha* may also be related to it. In Tamil it is *-kir*; in Mal. *-an*. The past particle varies euphonically to a great extent, but *tu*, *du*, *nu*, *ti*, *ni*, *ten*, *den*, &c are common forms. It appears to be a dative or possessive particle. The Naga *t*, and Miri *ta*, *ka* of the past are probably remnants of a similar system. The Tamil future is *-p*, *pen*, which is also found in Miri (*pa*). By compounding words and particles, minute variations of time, and other conditions and relations of action, can be expressed. The agglomerative phonology gives the southern languages great power in this respect. All kinds of auxiliary verbs may thus be euphonically subordinated and united to the principal one.

The ethnic history of the change from a crude phonology like the Ultraindian and Tibetan to a harmonic one is of so much interest, and the Tibeto-Ultraindian and Gangetic languages seem, at the first view, to be so illustrative of a spontaneous phonetic development, that it will be satisfactory, before proceeding further, to consider whether the facts which we have already passed in review warrant any decided inference on this subject. For it must be allowed as possible, that more advanced languages, by coming in contact with the crude Ultraindian ones, have modified their phonologies and produced the semblance of a gradual and natural development. However this may be, the postpositional alliance of Southern Asia admirably illustrates a change from monosyllables to polysyllables, from intonation to inflection, from a barbarous and difficult to a soft and harmonic phonology. In all its languages vocables are, in general, crude, while accessory,

relational or servile words or particles are very abundant. Even in the Mon-Chinese, or Chino-Ultraiidian, alliance, many of the particles have been greatly diverted from their primitive meaning and cannot now be said to have an independent existence. In the Burman, the postpositional formation has not yet thrown off the tones, complex sounds, monosyllables, homophons, segregatives, double words, and crude ideology of the Chino-Ultraiidian Alliance. Many of its serviles, and most of the component members of its double words, still retain their independent sense and position. But it has reduced the tones to two, which are merely differences in quantity, and do not therefore give to syllables the same degree of isolation which the proper tones cause. It sometimes uses euphonic particles to connect principal words and serviles, it accomplishes some ideologic changes by single letters which have no independent meaning, and others are attended by a mutation of surds into sonants, by the reduplication or by the elision of letters. In Tibetan, homophons and monosyllables are still common, but there is neither tone nor accent. Dissyllables are abundant, many servile particles are only used as postfixes, prefixal and postfixal letters have an ideologic power, of which a striking instance is the expression of the future by a postfix *s*. Many of the postfixed formatives have no independent meaning. The Tibetan thus exhibits all, or nearly all, those characteristics of the formative languages which can exist without accent and harmony. We saw, however, that both in it and in the Burman, much of the ancient harshness and complexity of sound, preserved in provincial dialects of Tibet and partially also in some of the Ultraiidian languages, is withering away and a softer phonology growing up. In the Miri, Mikir and Garo the harmonic tendency becomes much more distinct. Isolated sounds no longer satisfy the ear, and almost every substantive is rhythmically expressed by a union of two. In Miri the phonetic vitality shews itself in some curious traits. When a sexual word is added to a substantive, the first syllable of the latter is dropt, and in asking whether the sex is male or female the last syllables of the sex-words are also dropt. The numerals are not the abrupt monosyllables of the Burman and Tibetan but mostly dissyllabic and connected by the affix *ko*. It is worthy of remark that the Miri appears to be somewhat more advanced phonetically than the Mikir and Garo of the Burman side of the basin of the Bharanputra. In Bodo the harmonic power is considerably more developed, and in the Dhimial and Naga a new ideologic trait makes its appearance in the union of the postfixed pronoun with the verb.

In all the preceding languages the pronominal agent is preplaced like an appellative one, and this is the case in the Dhimial and Naga also, the postfixing of a pronoun being pleonastic. No direct explanation is therefore afforded of this new

phenomenon. We remark, indeed, that in the language in which it attains its highest degree of inflection, the Naga, the pronoun itself presents peculiar traits. In most of the preceding languages the pronoun stands on the same footing with substantives in the formation of the plural and possessive. The plural is the same as the singular, or it is signified by the accessory word used with substantives. The possessive also is indicated by position, or by the substantive particle. But in the Naga we find that the singular, plural and possessive pronouns are distinct words. That the pleonasm is not a consequence of this, however, appears from two facts. The first is that in the Mikir, Garo and Kasia the plurals have a certain degree of independence, from the particle being confined to the pronouns and phonetically united to them. In the Khamti and Siamese the singular and plural of the first person are separate, and it is still more remarkable that in the Singpho, adjacent to the Naga, the plurals of both the first and second persons are distinct words, and the plural of the third is expressed by a peculiar postfix, while the Burman is as simple as the Tibetan, Chinese and Anamese. The second fact is, that in the Dhimial the pronoun presents, little variety. In this language we might be inclined to attribute the pleonasm to its strong harmonic tendency, but its neighbour the Bodo is equally harmonic and more so than the Naga. Some of the other languages not possessed of this feature are also harmonic. Thus we can find no satisfactory explanation in the character of the associated languages of this sudden appearance of a highly flexional trait. It is a further argument, although not a strong one, against its having been of spontaneous development, that in the Dhimial it does not extend to the 3rd person.

There are two classes of the pronominalised verb which suggest an important distinction of origin. In the first the postfix is simply an echo of the preplaced pronoun, euphonically contracted or altered. Here the postfix form has evidently been produced from the preplaced, and as the latter is still used, it follows that the full form not only existed previously to the contracted, but continued in use while the latter was gradually assuming its quasi-flexional character. In such an echo as the Gond *wur wunktur*, *wurg wunkturg*, the postfix must be still felt to be pleonastic, or merely euphonic and emphatic. We cannot in this instance conceive that the original position of the pronoun was after the action word, and that, on its amalgamating with the latter and becoming of faint force, the original full form was, for the first time, preplaced, because before the postfix *ur* or *wurg* could cease to be significant, the full forms *wur*, *wurg* must have been disused and lost. The only explanation that can be given in such a case is that the postfix arose out of the native euphonic genius of the language, or was induced by the influence of another language which had the habit of repeating the pronoun post-

fixally, so that, ultimately, we must rest in the euphonic cause.

In the second class, the postfixed pronoun is a different root or form from the full or preplaced one. Here there is no room for the preceding explanation and we must resort to an ideologic one. The postfix is the remnant of an original postplaced full form which has been lost. The preplaced pronoun is a new one, which, in most languages, has probably been received from without. Although a plurality of pronouns is not an uncommon possession, it is not conceivable that two distinct words were ever used, one preplaced and the other postplaced, save from imitation.

In all the cruder languages, the action word is substantive rather than verbal, and it is connected with the pronoun or other subject possessively. May not the dead personal endings of verbs in many of the advanced languages, belong, in their origin, to an archaic stage or basis-formation when the agent or possessor was postplaced? In Chinese, Burman, Tibetan, Scythic, Japanese and Dravirian the possessor is placed first. In languages that radically belong to this alliance the pronoun must have preceded the action word, and where a distinct postfix also occurs, this must have been derived from another formation. Amongst the languages of this alliance, several, as the Manchu, Mongol (save in the 3rd person), Burman, Tibetan, Miri, Mikir, Bodo, Garo, Malayalam, are without postfixes, and, in this respect, remain closer to the crude monosyllabic type. Others, as the Naga, Dhimal, Kol, Gond, all the S. Indian languages, (save the Mal.) and the Turkish, have postfixes, and in all, save in the Naga and a few others to a partial extent, they are merely echoes of the preplaced full forms, contracted and sometimes more or less disguised. As they chiefly prevail in those languages which are distinguished by harmonic phonologies, and in nearly all are euphonic echoes, their origin, in this alliance, may safely be ascribed to the love of euphony, and emphasis, and their extension to imitation. It is not a trait that we should expect to find spontaneously shewing itself in many languages, and it is more likely to have been derived by the Gangetico-Ultraiadian tongues from a highly harmonic group like the Dravirian or Fino-Japanese, than to have originated close to the monosyllabic boundaries in such a language as the Naga, and been thence transmitted to more remote and harmonic members of the postpositional alliance. In the more southern Indian languages the same trait is repeated, and the phonology is, at the same time, far more powerfully harmonic. In the Kol and the great southern harmonic family, the repetition of the pronoun after the verb appears as a phenomenon that might naturally be produced by their great euphonic activity and rhythmic tendency, and if the trait be a native Indian one, it probably arose in one of those languages or their prototypes, and was communicated by the Dravirian formation to the Gangetico-Ultraiadian.

To the contact of the old Indian languages we may also attribute a more rapid development of harmonic power in the Miri, Naga, Bodo, Dhimal &c., if we are not prepared to go farther and recognize in them Dravirian languages overlaid by cruder formations. To convert the S. Indian languages into flexional ones, approximating to the Iranian, nothing is wanting but a higher intellectual organism, the linguistic activity of which would show itself chiefly in raising the ideology to abstract force and form, and expend itself less in the mere culture of euphony.

These observations were demanded by the importance of the phenomenon to which they refer. On the other prevalent ideologic traits my remarks shall be brief. The formative system of the most advanced postpositional languages is found fully developed in the Burman and Tibetan, which possess assertive, causative, potential, desiderative, prohibitive, conditional, inceptive and other particles, generally postpositional or postfixal. The same formatives probably exist in the adjacent transition languages of India, although they have not been fully described. In the Dravirian, as in the Fino-Japanese, they are fully developed. The tense system is simple and even crude in nearly all the languages. The present and future are or may be represented by the same particle as in some other alliances. In general, full words are not used, servile particles and affixes prevailing, with occasional flexions. All these features, as well as the peculiar collocation and the substantival or participial sentence-building, are found in Burman, in which also the germ of a harmonic phonology appears as a native element, for some of the traits to which attention was drawn are evidently not borrowed from any adjacent more advanced language. Burman wants only entire freedom from the tonic system, a development of its harmonic germ, and the traits dependent on this, such as the pronominal echo, to take rank with the Seythico-Dravirian members of the alliance. The affinity between the Gangetic and Burmah-Tibetan groups is equally close in other respects. The collocation of the former is Burmah-Tibetan. Reduplication is much used; postfixed particles, in some cases flexions, of direction, possession, tense, and mood occur. The Miri has an assertive postfix, and the Garo has the Tibetan assertive flexion. The directives are true substantives, as they are referred possessively to the object in Miri as in Tibetan. The qualitative being post-placed takes the directive or other postfix (Miri).

The postplacing of the qualitative is a remarkable anomaly in the Burmah-Tibetan languages. From the ideologic connection between the possessive and qualitative, from both preceding the substantive in all the other postpositional languages, as in Chinese, and from the possessive being preplaced even in Burmah-Tibetan, the probability is that the position of the qualitative in that family is owing to an archaic influence of the Mon-Lau formation, or to the Burmah-Tibetan having originally been more akin to

this formation than it now is. Both must have been in contact in western China before the Chinese formation spread so far in this direction. The special Tibetan traits found in several of the Gangetic languages need not be recapitulated here. Apart from the greater phonetic development, the only point in which the Gangetic group decidedly advances beyond the Burman and Tibetan is in the pronominal postfixes (Naga, Dhimal) which I have already discussed.

My remarks on the characters of the purer Dravirian or S. Indian languages were so comparative, that it is unnecessary to make any additions to them in this place. But some important points remain to be adverted to. The Tibetan and Burman on the one hand, and the polished Telugu-Tamulian on the other, are distinguished from the intermediate languages by a comparatively high culture. The nations who speak them have arts, letters, literature and elaborately artificial systems of religion and philosophy. The intermediate non-Arian tribes are rude and uncultured. While, therefore, the cultivated languages of the North and South are decidedly separated by phonology and the traits dependent on it, their ideologies possess more refinements in common than are to be found in the ruder languages. Far advanced phonetically as the Dhimal is beyond the Burman, the latter is probably much more complex in its ideology. We have not sufficient knowledge of the Gangetic languages to pronounce positively on this, but, according to our present information, the Burman has affinities with the Tamil that are wanting in the Bodo. As the special affinities between the S. Indian and the Gangetic groups are those which must determine the true ethnic place of the latter, we must carefully distinguish the degree of harmonic and agglutinative power displayed in each. In the former this power is very great, although it is now less free than in some of the ruder languages. The compounds both of roots with particles and of roots with roots are longer, more regular and more complex than in the latter. The most harmonic of the Gangetic languages are much less fluent and polysyllabic; and the monosyllabic element is so strong that the phonology is curt and hampered compared with the Southern. The elisions and agglutinations have also this rude characteristic that they appear, in general, to be arbitrary and merely euphonic, instead of being subservient to a refined ideology, as is frequently the case in the Telugu-Tamulian group. The Tamil has not received the high Sanskrit polish of the Telugu, and it probably better represents the archaic phonology of S. India. It is at once harsh and harmonic, rude and cultured, but its great agglomerative tendency places it at a distance from the curt phonologies of the north. Although the Tibetan and Tamulian phonologies are so different that they can hardly be compared, the affinities between the two languages are not purely ideologic.

Some of the complex and harsh sounds found in Tamil are similar to those of the ruder Burmah-Tibetan. The repetition of the final consonant, which occurs before the assertive postfix *o* in Tibetan, is used in Tamil, whenever a monosyllable ending in a consonant precedes a word beginning with a vowel. The euphonic variations of the Tibetan postfixes anticipate the declensions of the S. Indian &c. The tendency to minute generic distinctions, evinced in the separate words for the young and for the male and female of several classes of animals, is a Burmah-Tibetan and S. E. Asian trait. The change in the terminal of the possessive, the feminine and neuter verbal postfixes of the 3rd person, some formative and other traits, are peculiar to S. Indian.

After making full allowance for common traits, we cannot avoid the conclusion that these are mainly primordial and have no necessary connection with the present relative geographical positions of the Dravirian, and Burmah-Tibetan, while the great break in phonetic development between the former and the latter, and the distinctive characters of its phonology, elementary as well as structural, of the quasi flexions to which it has given rise, and of the pronominal system, with the union between the pronoun and verb, the exclusive and inclusive forms and other idiomatic peculiarities, place it beyond doubt that the Dravirian is a separate and well marked formation. Its persistence in the Vindya range and over all the Peninsula shews that its junction with the Gangetic-Ultrairian formation must have taken place in the Gangetic plain or on its margin. If Dravirian tribes did not occupy that plain before an Ultrairian race moved into it from the eastward, the Dravirian linguistic formation could not have left such deep traces in the Dhimel and the Bodo, nor could its influence have reached the Himalayan and Assam mountains and Ultrairia itself. It is probable therefore, on linguistic evidence alone, that Dravirians occupied the plain of the Ganges and all India before the present Gangetic tribes imported or diffused the Ultrairian and Tibetan elements which are now found in their languages. Whether the Dravirian formation abruptly stopped on the southern border of Assam prior to the monosyllabic era of Ultrairia, or extended along Ultrairia to the Malay Peninsula and the Eastern Islands, is a question on which some light will be thrown in a subsequent chapter.

It may be concluded that the Southern languages, in their high phonetic power and its application to a more intellectual and elaborate ideology, are at a great distance from the Tibetan and Burman and the languages in which their crude phonologies and ideologies prevail or form a considerable ingredient,—that the same formation prevailed in the Gangetic basin at a remote

period,—that Ultraiadians speaking languages allied to those of the Irawady basin spread into it and along the sub-Himalayas, producing intermediate languages,—and that, in a still later era, Tibetans moved into the Gangetic basin and exerted a considerable influence on many of its languages.

The Tibetan, archaic Indian, and Tibeto-Indian languages, when compared with the S. E. Asian group, connect themselves ideologically with the Burman family more closely than with the Chinese, Anamese, Siamese, Kambojan and Mon. While the Kuki, Bodo, Naga, Mikir and Garo belong mainly to the same alliance, the Kasia alone appears to pass by the Burman and claim a relationship to the intonated languages beyond. Like them it is prepositional and places the object after the action. It approaches nearer to the Mon, Kambojan, Anam and Siamese than to the Chinese, agreeing with them where they differ from the latter.

The postpositional alliance connects itself with the eastern or Chinese more closely than with the western or Anam-Mon members of the monosyllabic group. The features common to Burman and all the monosyllabic languages may be considered as connecting the latter archaically with the postpositional languages and the partially derivative Indo-European. Those in which Burman departs from the Anam-Mon formation and approaches Chinese, form peculiar links between the latter and the postpositional alliance. Chinese is thus ideologically the most central of all the languages we have hitherto adverted to.

ERRATA IN LAST NUMBER

- Page 109 Note 2nd line from foot for *-pi* read *yi*
 „ 113 Note 17th line from foot for “*ba* is used in all in the past only for in the past and future ; *ma* is used in all (but) in a few instances in the past and future only” ; read “*ba* is used in all, in the past only, or in the past and future ; *ma* is used in all ; (but in a few instances in the past and future only)” ;)
 „ 119 17th line from top for Khyengs read Khyeng.
 „ 134 6th line from top, for “*bajan* “boy,” *wajan* “girl” read “*wajan* “boy,” *bejan* “girl”” ; and add at end of sentence “and *be* being used for “wife.” So also *naval* “man” *beval* “woman,” in which *val* is a Dravirian element.”
 „ „ 7th line from top for *nha* read *na*.
 „ 135 1st line from top for *ubal* read *ibal*.
 „ 137 3rd line from bottom after “languages” add “save Bodo.”

JOURNAL OF AN EXCURSION TO THE NATIVE PROVINCES ON
JAVA IN THE YEAR 1828, DURING THE WAR WITH
DIPO NEGORO.*

WE passed through two rivulets, the Kali Upa and Kali Benning, the bridges over which had been destroyed during the war. Soon after we saw two images, I believe of Jain, close to the road, on the left hand; they are sitting on pedestals, about 4 feet high, in good preservation—our guide said they had been brought from some temple in the vicinity, now entirely ruined, and placed in their present position by Sultan Sepo, lately deceased. There are, I believe, many ancient remains lying about in this neighbourhood, but being covered with longgrass and bushes, they are not visible from the road. In one place a water-course across the road was entirely formed of cut and sculptured stones, and several single ones were lying here and there. The first building is in a field on the right of the road, at a short distance from it, close to a *desa*, or village, (called Chandi from the temple near it), embowered in trees; this edifice rather resembles a dwelling house than a temple, and is in better preservation within, than any of the others; the outside case is a good deal defaced and torn, but enough remains to shew its original beauty; it is an oblong square, with only one door, in front, raised on a high basement of square stones with ornamented borders; on each side of the door is a window, and the interior is divided into 3 apartments, with doors communicating. I should guess the size of these rooms to be about 10 feet by 15—there is little ornament within, the walls consist of plain cut stones, but the window frames are sculptured, as well as the tops of some niches in the wall, which appear rather to have answered the purposes of closets, than to have been occupied by figures. In this building there must have been 2 stories, for in the cornice of the lower rooms vacancies are seen at regular distances, for the rafters of the floor, and there is a window in front above, over the door, and one each over the lower windows, so that the building seems to have contained 6 rooms; the roof is formed of plain cut stone, in the shape of an oblong alcove, about 10 feet high above the walls, these appear from 30 to 35 feet high; the roof is still in good preservation, being less entwined and separated by the branches of the Banian or Waringin tree, than in the other buildings; the walls are from 4 to 5 feet thick, all of solid stone; the door-ways and window-cases are nearly perfect, and with some trouble this ruin might be made habitable; if the exterior could be repaired and restored, it would be an elegant house, for the four walls outside are literally covered with figures, niches, pilasters, arabesque borders, and other ornaments, beautifully sculp-

* Continued from p. 157.

tured; some of the figures are those of females holding a lotus or other large flower, and the proportion of their forms, and grace of their attitudes are really striking; it is almost impossible at first sight to ascribe this fine workmanship to any but European artists, yet by these it cannot have been performed.

I entered the building, up a ruinous flight of steps, about 10 or 12 in number, now broken and overgrown with exuberant vegetation; this staircase appears to have been ornamented by figures at top and bottom; they are now too much mutilated and obscured by bushes, to distinguish what they represented.

Unlike the temples where the roofs are partly or entirely open, this building appears not to be frequented by bats and other birds, the floor is in consequence drier and cleaner—among the rubbish that lay scattered on the broken flooring of the middle room, my foot struck against a human skull, and a little further some of the bones that once belonged to it were still laying, with rags of colored cotton, perhaps part of the wearer's last dress; these were probably the remains of a wounded rebel or wandering mendicant, who had crawled or been brought here, to die—my native companion told me that such objects are frequently seen in similar places, and that the wild dogs had probably feasted on the rest of the body. I thought of Byron's horridly beautiful lines, which are here literally exemplified, and the pleasure I felt in examining these fine ruins was for some time suspended.

We proceeded about half a mile farther, where on the left, or opposite side of the road, the ruin of a Temple rises high above the surrounding bushes, itself partly covered by the spreading branches of the Banian tree and other vegetation; this edifice stood on a high basement, ornamented with ribbands and cornices, and appears to have consisted of one large central temple and three smaller ones, or chapels, projecting from it, but not communicating with it; these were opposite to the E., W. and N. points of the compass; the S. projection or portico seems to have been occupied by the steps and door-way leading up to the principal temple; of this stair-case, however very little remains, and the opposite or N. side, has also fallen in; the back part or interior is thus exposed from top to bottom, and exhibits the pinnacle or tower, rising from the wall of the cell, of square blocks or steps of stone, projecting inwards, to the height of 60 feet or more, from whence they seem threatening to crush those who look upwards. There was formerly an altar in this chapel, but only the traces of it remain; the two other side temples are more perfect and contain several niches, from whence however the statues have been removed, except in two or three above the door, where there are sitting figures more or less defaced.

Round the centre door are several empty niches, and opposite to it, at the back, the remains of the grand altar, now also

unoccupied; the Tumungong who accompanied us, said he recollected the figures being carried away,—it was during the English Government; they probably formed part of the collections made by Sir S. Raffles and Mr Crawford—in the upper part of the exterior are still several small images, in niches or in relief—also pilasters, borders of leaves and flowers, and arches surmounted by a huge grinning head, faithfully represented in the plates to the History of Java by Sir S. Raffles.

The outside of the temple is plain, the stones of equal size, regularly laid on and morticed into each other; the roof or pinnacle is eight-sided, probably upwards of 40 feet high, and open at top—this building is full of birds, who have covered the floor &c., with their dung; it is not easy to walk here, for the foot sinks in to the ancles, there is a strong sulphuric smell, and no doubt good saltpetre might be made of this earth.

Attempts seem to have been made to injure and deface the buildings by fire, for the lower parts are much blackened and cracked—but their greatest enemy is the Waringin tree, which insinuates its roots or branches through the crevices between the stones, and growing stronger and larger by degrees, separates them from each other, destroying the connection of the sculpture and overshadowing parts of the edifice, as the ivy does similar ruins in Europe. Around the base of the buildings, and at some distance from them, the ground is strewn with fragments of sculpture, and plain square stones that have fallen from above; between these long grass, weeds and small trees have sprung up spontaneously, altogether making it very difficult to approach, and almost impracticable to examine the ruins with any accuracy. In the time of the late Lieutenant-Governor Raffles, they were cleared away, so that drawings might be made of the several temples and figures, from which the plates in his History of Java were afterwards engraved. But this operation of clearing should be repeated annually at least, to have any good effect.

I was obliged to leave these interesting ruins with reluctance after a very hasty view; evening was coming on, the sky threatened rain, and we had a ride of 11 miles before us, partly over a difficult and unfrequented road; we therefore returned to the Brambanan cantonment and took leave of the officers, who hospitably endeavoured to detain us to dinner,—this however we declined, and proceeded on our journey, the latter half of which was performed by moon-light; we fortunately escaped the rain and reached Klatten in time for a late dinner, after which we soon retired to rest from our fatigues, having ridden about 24 miles during the day, besides walking.

On enquiry it appeared that Kulassan is only about 8 miles from Djocjocarta, so that we were to-day within an hour's ride of that native capital, but a part of the road is still considered unsafe,

being at times infested with wandering partisans of the insurgents, who attack travellers, if single, or in small parties.

Klatten, 22nd July—Still somewhat weary and stiff from yesterday's ride and clambering over the ruins. I went early in the morning to look for a good bathing place, to refresh myself by a cold bath, but could find none. There are two small rivers near us, but both shallow, full of large stones and rocks, one is used to bathe the horses, and the other is frequented by diseased beggars, so that I was disappointed.

In the afternoon, while dining with the commandant, a letter was brought me from the Resident, proposing to me to join him to-morrow afternoon at Kalitan, where he is to pass on his way to Buyulali; from whence he will proceed on horse-back, the day after, to visit several Bentings on the cross road between that place and this, where he is to arrive in the course of the day after to-morrow, and return from hence to Solo.

Klatten, 23rd July—According to the Resident's invitation, I should have gone to-day to join him at Kalitan, and proceeded in his carriage to Buyulali to pass the night; on further enquiry however I gave up this plan, as I should have had to travel 6 hours in a tandu to reach Kalitan, and pass the greater part of to-morrow on horse-back, through bad cross roads, causing me fresh fatigues, that would probably be ill-repaid by the sight of the field fortifications which are the object of the Colonel's tour. I was further induced to await him here to-morrow, from the threatening appearance of the weather, to which one is exposed in a tandu. This conveyance, more singular than easy or elegant, consists of a frame of bambu, to which a mat is slung longitudinally—on this mat the traveller sits, or rather lies double, his feet resting on a smaller bambu which crosses the legs or stand of the machine—a kind of shed is raised above it, of palm leaves or straw to keep off the sun and rain, but this shelter is far from perfect—the machine is carried on the shoulders of 2, 3, or 4 men, who move at a small trot, which communicates an uneasy motion to the traveller, especially if not used to it—they stop to rest now and then, which makes this mode of travelling tedious; the distance to Kalitan is only a few miles, which I should have been 5 or 6 hours in performing. I therefore wrote to the Resident that I would await his coming here to-morrow, instead of joining him on the road and accompanying him in the circuitous and fatiguing ride from one temporary fortification to the other.

An officer arrived from Djocjocarta, reports that there are 430 sick military in the hospital there, most of whom are Europeans, and that the average of deaths at present among them is 5 or 6 daily; this is the case at other places also, near the theatre of war. What a dreadful waste of human life! if it were on this account only, how sincerely ought we pray for the close of these unhappy

disturbances—it is calculated that every European soldier who dies here has cost Government £100. but this, morally considered, is the smallest part of the loss.

It is said that there are, or have been at one time during this war, nearly 30,000 men under arms on our side, and in the pay of government, the greatest part of whom however consist of native troops, and auxiliaries from different islands in the Archipelago—of an expedition of 3,300 men from Holland in 1827, more than half are supposed to have died already, and the remainder are mostly in the hospitals.

Klatten, 24th July—Before breakfast walked to the Javanese village, or *desa* Klatten, and paid an early visit to the chief; his house, and the whole village nearly, had been burnt and destroyed by the insurgents in 1825. It now consists of small thatched huts, containing as he told us about 80 families only—many of its former inhabitants have fallen in the war, and others are wandering about as vagabonds or rebels, afraid or unwilling to return to their former habitations; this may be considered as applicable to the greater number of villages throughout the districts which are or have been the seat of disturbance. The village is prettily situated on a gentle eminence, on the bank of a small stream, and shaded as usual by numerous cocoanut and fruit trees, giving each village, at a distance, the appearance of a grove, through which the native buildings are hardly perceptible; this village was not at all fortified against attack, as they are on Sumatra; it was not usual in former times, when peace prevailed, but this happy security exists no longer.

The Resident arrived in the forenoon from Buyulali, by a cross-road, having been 6 hours on horse-back; during which he had inspected 3 Bentings or field stockades; he invited me to go with him to-morrow to see another 8 or 9 miles off.

This evening the moon, which is near the full, being covered by clouds, the neighbourhood resounded with the natives beating in their rice-mortars, to cure the illness under which she suffers, according to their superstitious notions.

Klatten, 25th July—Started at 4 past 5 this morning, on horse-back, with the Resident and some others, for the Benting at Pichinan. Our route was at first by the high road and towards Djoejo, which I had travelled towards Brambanan on the 21st instant, for about 6 miles; we then turned off to the right through the rice-fields at a place called Trankisan, and proceeded in a N. Westerly direction towards the great Volcano or Gunong Merapi.

The country around this road appeared nearly deserted; and not to have been cultivated for 2 or 3 years at least. We had not proceeded far through the fields, before we came to what is called the Zand Zee (Sea of Sand); this is an effect of the last explosion of the Merapi in 1823, when a vast stream of volcanic mud and

stones descended to the plain, and scattered itself for many miles around, covering the fields of rice, overthrowing the huts of the natives, trees, bridges, and filling up the beds of the rivulets, as before remarked. The moisture having subsided, what remains is now a layer of blackish sand intermixed with pebbles and large stones still black from the effects of the fire; in some places this "sea of sand" is narrow and appears to have filled up the bed of a river, ravine or hollow space between high grounds, in others it extends over a breadth of perhaps half a mile, and is so thickly strewn with immense stones, that it is difficult to make your way through it; the force must have been very great to propel these ponderous masses so far—the ground thus covered must be lost to agriculture for many years, and much labor will be required to make it fit for cultivation again—the allang or other rank weeds meanwhile grow up luxuriantly, and impart a peculiar air of desolation, as they wave in the wind; the hand of nature and that of war have here combined to devastate the scene; the villages that were partly destroyed and diminished in population by the effect of the explosion in 1823, were 2 years afterwards burnt and plundered and their inhabitants scattered by the war. All this part of the country submitted to the rebels in the commencement, and many of its former inhabitants are said to be still with them, or formed into petty bands of robbers on their own account; many more have already fallen, others have fled to the government districts, and settled there in one way or other. We passed over many spots in which the traces of human habitation were still discoverable, but which are now deserted—cocoanut trees without their leafy crowns, which have been cut off for the edible substance they contain, other fruit trees lopped to the stems, which are still blackened by fire, hollowed stones in which the inhabitants pounded their rice, remains of fences of live bamboo and other useful plants, stems of plantains and pine-apples, spaces marked out by rows of stones, where once the fronts of houses stood,—all these bore witness that this tract of country was once well-peopled and cultivated; now it is quite the reverse; after leaving the high road, we scarcely saw an individual, except some miserable old women here and there, selling betel and tobacco &c., by the roadside; every man we met was well-armed, the musket and spear have succeeded to the plough and hoe, industry has fled with tranquillity.

We had to cross many shallow streams of water which proceed from the Merapi, and have cut channels for themselves through this sandy tract. Some rivers have been filled up, and new ones formed in many parts, since the explosion, about five years ago.

After a ride of about two hours and a half at an easy rate, we arrived at the Benting or Stockade of Pichinan; it is occupied by the troops of the Emperor, under the command of the Prince Ario

Mataram, who is considered one of the bravest and most trustworthy of the Solo Commanders; he received the Resident with military honors as well as he could, the garrison being under arms, drums and fifes playing &c.; there is an European officer stationed here with 2 non-commissioned officers of artillery, for the management of the battery, which is mounted with two iron 2-pounders, and two brass field pieces (of 2 lbs. I believe); these Europeans, one would think, must lead a melancholy life, shut up in this way, among so many natives, and without any resource to pass the time; the Lieutenant however seemed to indicate the contrary, for his tongue was rattling away in a dialect of his own, combined of German, Dutch and French, the whole time we were together; perhaps he was resolved to give it a holiday, and make the most of this opportunity of having European listeners, which can seldom happen.

This Benteng or Stockade, being a good specimen of these field forts, I will briefly describe it here.—A square, oblong or irregular sided spot of ground, according to local circumstances, is marked off, outside of which a ditch is dug, and filled with water, if procurable, if not, with borangs or pointed bambus, stuck obliquely in the ground, to wound the feet of an advancing enemy; behind this ditch palisades of cocoanut or other trees are fixed deeply and firmly in the ground, in an upright position, close together; above 8 feet high above the surface, behind this rampart, is a bank of earth about 2 feet high, lined also with trunks of smaller trees, on which the garrison stand to fire with small arms; at two corners are raised regular bastions of earth and palisades, projecting from the body of the stockade, and mounted with heavy guns, which can be wheeled round, on platforms of split bambu, so as to command 2 sides of the wall, and a range of the country round; the other two corners are likewise provided with raised mounds, within the wall of the stockade, in which the 2 field-pieces are placed. The space within is occupied by the commandant's quarters, guard-house, magazine, &c. all of bambu, thatched with *allang*, which is very combustible, and exposes this kind of building to great danger from fire. I was glad to see a powder magazine building, of brick only; outside of the walls is an assemblage of huts, where the soldiers and their families live, where the horses are kept, victuals dressed, &c. After shewing us round his Fort, the prince gave us a substantial *déjeuner à la fourchette*, to which our ride enabled us to do justice, and which concluded with a glass of wine and a cigar. We afterwards set out on our return by the same road, accompanied by the prince and the German Lieutenant, who was an amusing companion, and arrived again at Klatten about $\frac{1}{2}$ past 1. Being somewhat fatigued, I tried to refresh myself by a *meridienne* before the hour of dinner, but either my being unaccustomed to the indulgence, or

at present too much heated with the ride and the sun, prevented my enjoying "tired nature's sweet restorer, balmy sleep," till my usual hour at night.

26th July, *Klatten to Surakarta*—About 4 o'clock this morning I very reluctantly left my bambu couch, at the stentorian call of one of the party, and prepared to return to Surakarta, with the Resident and his suite; it was fortunately moon-light, which enabled us to see our road though not to distinguish objects at a distance. We rode on horseback at a gentle pace, the first 8 or 10 miles, to Dilangoe, where we found the Resident's carriage and horses, that had been sent over night from Solo; while these were preparing with the usual Javanese slowness, we entered the stockade and took a cup of coffee, which the commanding officer kindly set before us, with bread, eggs, &c.

The stockade of Dilangoe is much smaller and not so well-built as that we saw yesterday; it must however be remarked, that the latter has been five months in building, and is not yet finished.

The country along the road towards Surakarta, offers a pleasing contrast to that over which we rode yesterday morning; the fields are all in different stages of cultivation, from the seedling padi to the crops nearly ripe; ploughing for a second crop very general. Very little ground apparently occupied with other crops than rice—here and there some kachang or beans, katela or manioc &c, no allang to be seen. How fertile and highly productive this country must be in times of peace and industry! Even the grumbling farmers of England would surely be satisfied with two crops every year, each returning on an average sixty, eighty to a hundred fold; this is the produce of the fertile plains of Java, wherever water can be procured in sufficient quantity to irrigate the fields, fallow years and manuring are unknown to the Javanese agriculturist; on the other hand he has a high rent to pay, from $\frac{1}{3}$ to $\frac{1}{2}$ of the produce to his landlord, besides feudal services to the sovereign from time to time.

One of the bridges on the road was repairing, so that the carriage could not pass—had the river been deep, this would have been a dilemma. fortunately however the stream was shallow, and the carriage descended the bank by the side of the bridge, and was dragged by the six ponies through the water, and in a gallop up the opposite bank—we have previously descended and walked across the bridge.

Arrived at the Residency at $\frac{1}{2}$ past 8 to breakfast.

27th July, *Surakarta*—This morning Prince Poroboyo came to invite the Resident to an evening party at his house, to celebrate his birth-day, and also the late nuptials of his relation, the Radin Ayu Gusina before mentioned.

We proceeded to the Kraton accordingly at about half-past six and found a numerous assemblage of native chiefs, officers, and inhabitants of Solo, as well as His Highness the Susunan, who this

evening had added to his usual decorations, two Dutch orders of knighthood, one suspended to the other on the breast of his coat. The honor of his presence seemed rather a bar to the gaiety of the party, for the princes and chiefs are obliged to sit silent and stiff, when he is present; he is not popular either with them or Europeans, which is not to be wondered at, when his character and conduct is known. During the course of this evening he behaved with great impoliteness, lounging at full length on a sofa at the centre of the room, turning his back to the Resident's lady, who sat at the side of the sofa, and seldom condescending to speak to any one; he was attended, as is his custom, by a numerous train, among whom were many brothers, uncles, cousins and nephews, very young men and boys, in the Dutch military uniform, with Major's and Colonel's epaulettes,—these bring him the siri box, spitting pot, fan, &c. and carry his sword and hat; one of them was summoned to pull off His Highness's shoes and shampu his royal feet! These things struck me as very inconsistent with the respect exacted by the Dutch from the native authorities, and rather calculated to bring contempt on the distinctive marks which are, or ought to be, the rewards of military merit. I suppose he has been tacitly allowed to confer these epaulettes so liberally on all his relatives and dependents, until it has become difficult to put a stop to it without unpleasant effects and during this war it might be impolitic.

There was a band of European, and one of native music, but no dancing, there being no ladies present but those of our own party, 4 in number. I fear, the evening therefore passed very heavily with them. The Javanese ladies did not make their appearance—they were assembled in a large room behind the hall where we were, and we went to pay our respects to them there; among them was the young bride, who with her family has been staying 2 or 3 days at Prince Poroboyo's, according to Javanese custom—they were seated as usual, on the floor, in a double row or semi-circle, with their arms and necks bare as well as their feet, jewels and flowers in their hair, the whole carpet indeed was strewn with flowers, whose strong scent added to that of the dupa or incense, which they burn continually, and the scented oils they use on their persons, was nearly overpowering in a close warm apartment filled with their numerous attendants.

The entertainment might rather be called a late dinner than a supper, for it was not nine o'clock when we went to table;—in this respect we were fortunate, for it was the sooner over. The table was covered as usual with viands of all kinds at once—flesh, fish and fowl, vegetables and soup, pastry and sweetmeats, rice, in all its varieties of dressing, fruit in quantities, curries and other native dish *ad infinitum*; it would be almost impossible at these feasts, to find on the table a vacant space large enough for a plate, their idea of a good meal is in the abundance with which the table is covered:

with regard to the cookery they are not particular, *Monsieur Ude* would never have made his fortune or had his transcendent talents duly appreciated, at the Court of Java.

During the dinner, the native and European bands played alternately, and sometimes together, which was anything but musical; we should have been at a loss to say what they were playing. We were obliged to drink some toasts, of course, but fortunately not so many as usual—among others the resident proposed the health of the whole court of Surakarta and the princes attached to it, which was answered by the Susunan's giving that of the residency of Surakarta, and the European gentlemen belonging thereto; one of the company proposed a toast, the descendants of Adam, which amused our Javanese friends greatly; the prince, our host, gallantly proposed a bumper to the health of the European ladies and native princesses of Surakarta. We rose from table after a session of about an hour and a half, which I thought very tedious, having dined already at 5, and of course finding it impossible to eat; even the claret and water I was obliged to drink to the toasts, and in compliment to my Javanese acquaintance, was very disagreeable to me, and experience has taught me that after a late dinner it is better neither to drink wine nor eat anything.

There was no card playing, as usual on these occasions, and though the dancing girls were in attendance, they did not perform, perhaps because there were European ladies present; there was therefore no other pastime than eating, drinking, smoking and talking, which with Javanese companions is not very amusing; I was therefore not sorry when the resident motioned to depart, and I found it was only about eleven.

One pretty custom at these parties I have not yet noticed—garlands of melati, champaka, and other scented flowers are handed round, on silver salvers, to the guests, who hang them round their necks, or fasten them to some part of their dress; these numerous walking nosegays diffuse a sweet smell around, which is not without its use, as it tends to overpower the effluvia of the Siri.

28th July, Surakarta—I was invited to breakfast this morning at Prince Mangko Negoro's, it being his birth-day, according to the Javanese calculation (by market weeks of 5 days); it is kept once in every 35 days, or more than ten times a year.

We proceeded to the Prince's Dalam or Palace, between 8 and 9, and were received by himself and his sons, grandsons and other relatives, all in the military costume of the Netherlands, some in the cavalry dress, with spurs half a foot long; the Pangerang himself wears a kind of staff uniform constantly,—at least I never see him in any other dress, while the other princes wear the Javanese and European dress indiscriminately.

A body of the prince's infantry, about 200 strong, were under

arms in the court, before the great Pendopo, and went through the manual exercise; they performed the several evolutions, according to the opinions of the commandant, who was present, with precision and activity, and as far as I could judge, they handled their muskets very well, presenting a regular, unbroken line—the same officer informed me that these troops are considered, among the auxiliaries employed by the Netherlands government, as second only to those of Sumanap and Madura, they are commanded by their own officers, relatives and dependents of Mangko Negoro; the word of command is given in Dutch.

The breakfast was as usual a most solid one, not consisting of tea and bread and butter with an egg or two as in Europe, but of a great variety of dishes of meat, poultry, vegetables, pastry, &c. The first attack was made upon the soup, of which there were 2 or 3 kinds—among these the favorite bird's nest soup, which was excellent, and contained a most liberal allowance of the white nests, procured from caves in the prince's own territories; if its cost were estimated at the value of the nests among the Chinese, this soup would be at least twice as dear as turtle. There was wine on the table, and tea and coffee were served round.

After breakfast we were entertained with the Gamelang Salindro, or Javanese band. That of Mangko Negoro I think the handsomest I have yet seen, it consists of 33 performers, which is more than the Orchestra of many respectable Theatres in Europe contains; the wooden stands on which the various instruments are placed, are handsomely carved, gilt and painted, mostly a bright vermilion colour; it occupies one side of the Pendopo, on the floor, where the performers are seated on mats, in a double file—this band is composed and the instruments were made by the Prince's own people—if it were to be bought, the expence would perhaps be £500 or upwards, and to maintain the 33 performers would cost at last £250 a year at the lowest wages. The music is always in a minor key, and at a little distance the sound is not unpleasing, though very monotonous. From time to time the music was accompanied by the songs and dances of the Rongengs, of which there were five present; one pretty little girl, whose age, I think, could not be above 8, but probably less, was the great attraction; she was apparently very expert in the measured movements of this singular mode of dancing, and her little arms, feet and fingers displayed great flexibility, as well as perfect symmetry—when she opened her mouth wide, however, as the high tones of Javanese singing require, it was disgusting to see her little teeth and tongue already disfigured by filing, and the use of siri; before and after each performance, the dancers perform the Salam to the Prince and the company, coming and retiring, as usual, on their heels and knees, till they are (or are supposed to be) out of his sight; these dancers were ornamented with

girdles, bracelets, breast-plates, and ear-rings of gold, and wreaths or bouquets in their hair, of gold and diamonds; their dresses were of a colored silk, with a long scarf round the waist, the ends of which hang on each side, and are used to heighten the grace or the coquetry of the various attitudes in the dance; their arms and necks are bare, and as well as their faces, covered with a cosmetic powder of a pale yellow colour. The Prince told us that he had bought the little girl above noticed, when a child, for 10 Spanish dollars! She has lost both her parents.

I am told there are altogether about 1,300 of Mangko Negoro's men now in the employ and pay of Government, of whom nearly two-thirds are armed with muskets, the rest are spearsmen, and irregular troopers; the latter are chiefly employed as messengers, to carry letters and orders, and escort Government property on the road &c. Besides these, the old Prince has about 250 infantry and cavalry quartered in his palace at Surakarta, some of whom occasionally assist in the garrison duty of the Fort, and escort the the Resident when travelling through the district. There were 2 small field-pieces standing in a corner of the *Passeerbaan*, or square court before the palace, with the proper number of artillery men in uniform—they were not fired, however; the old Prince told me that he formerly fired, on these birth-day occasions, either some volleys of musketry or a salute of cannon, but that since these disturbances he has preferred saving his gunpowder for the use of his troops in the field, very judiciously, as I replied.

Surakarta, 29th July—This morning the Resident received the report that a public robbery had been committed by the Tumungung or native chief of Serang, a place to the N. of this, on the frontier of Semarang district, but within the native territories—the person robbed is a Moorish pedlar, or travelling merchant, with whom the Tumungung had before dealings, and the principal property taken from him consisted in jewellery to a large amount, which the chief himself had commissioned him to procure, but took this mode of obtaining them at a cheap rate—he sent the merchant away under some pretext with his goods, but at a short distance from the place he was attacked by a party of armed men, at the head of whom was a son or nephew of the chief, who plundered him of every thing, and let him go. Of the property stolen, some was found in the Tumungung's house, as well as two or three of the robbers, who being seized and questioned, confessed the whole. This led to the arrest of the chief himself by the nearest European authority—this circumstance may serve as a specimen of the conduct of the Javanese regents or local chiefs under the native government. Colonel N. being ill of a fever, desired his Secretary to proceed to the spot without delay, to establish another chief, who was immediately appointed, and to make further enquiry into the business.

In the evening the Resident of Djocjokarta, who returns thither tomorrow morning, asked me to accompany him and stay a few days there, which I accepted, not having seen that place yet.

30th July, Surakarta to Djocjokarta.—Having hastily packed some linen and other requisites for a few days last night, I was awakened this morning at $\frac{1}{2}$ past 4 by the Resident of Djocjokarta, to set off with him for that place, which we did in a carriage at 5, by moon-light; it was a cool and pleasant morning, and the first part of the road was in pretty good condition. At day-light however, we found one of the carriage springs at the back was broken, no doubt from its being so heavy, and now and then jumping about from the inequalities in the road. At Kalitan, the first station where we changed horses, we got the broken spring mended with bambu and rattans, with which the Javanese can mend or make almost every thing, but this detained us nearly half an hour; we then went on to the next station, Dilangoe, but here by some accident, or mistake of the Post-master at Solo, there were no horses to take us on to Klatten, as we had expected; this was a sore disappointment to me, as it became necessary to go on horseback to Djocjokarta, a distance of 28 miles, whereas I had calculated on sitting in the carriage 9 miles further to Klatten, which would have left only 19 to ride; besides this, there was no horse for me at Dilangoe, that which was intended for me having been sent on to Klatten to wait our arrival there. I thought of remaining at Dilangoe till it could be sent back from thence, but then I should have had to proceed alone, and the party would have had to wait for me at Klatten; in this dilemma the officer commanding the Benteng of Dilangoe kindly offered me the loan of his horse, though tired with a journey he had performed the day before. I accepted this offer, though rather averse to riding strange horses, with gladness, to avoid delaying the party; while the horses were getting ready we took a cup of coffee *sans lait*, prepared for us by the commandant's lady.

This detention, and that of the broken spring, cost us at least an hour of the morning, so that it was 8 o'clock when we proceeded on our journey from Dilangoe and beginning to grow warm; we therefore walked the horses to Klatten, which we reached about 10. Here we found the hospitable Commandant S. and his officers just sat down to breakfast, having waited an hour for the Resident and his party, whom they at length gave up for this day. We partook of their meal, and rested ourselves till about noon, when we again set out on horseback for Brambanan. I gave the horse of the Commandant at Dilangoe into the charge of a friend at Klatten, to have him fed and returned to his owner, to whom I addressed a note of thanks for his polite assistance.

At a short distance beyond Klatten, we perceived a most of-

fensive smell, which proved to proceed from a human body, lying in the rice-fields near the roadside, almost without clothing, and in a state of putrefaction; this was most likely one of the wretched, diseased beggars, who are to be seen everywhere in these districts, who had crawled there, and died unassisted and uncared for. I wished to stop, and have the corpse decently buried, or at least some people placed there to do it, but these sights are no novelty now and my companions passed it without a remark, except that the smell was very annoying.

We arrived at Brambanan cantonment about 2 o'clock, where we found only one officer, who gave us some tea, which was very refreshing after the ride through the heat; we sat about half an hour with him, and then remounted our horses; we stopped a short time at the stockade of Kulassen, near the ruined temple, and again at that of Bantoelan, 2 miles from Djocjokarta; here we found a number of the Princes and Chiefs of Djocjokarta, who came to welcome the Resident on his return, so that we formed a large party of cavalry, (irregular cavalry indeed,) as we approached the capital.

Between Kulassen and Bantoelan, a distance of about 5 miles, we met not a single person on the road, except a party of about 30 men and women going to buy rice; the natives in small parties are still afraid of passing along the high road in this neighbourhood. The Resident pointed me out one large village on each side of the road now deserted, and which is said to be still from time to time the temporary abode of predatory bands, who watch the opportunity to attack and murder travellers who are not well defended; this is one of the disastrous effects of the war, and it will continue, I fear, long after its cause shall cease, especially in unfrequented parts of the country.

The road we travelled was the same described on the 21st instant, when I visited the ruins, I shall therefore only remark, that after leaving Brambanan, the scene became more and more wild and uncultivated, the approach to Djocjokarta at some distance is a perfect jungle, the villages are burnt and uninhabited, the bridges on the road utterly destroyed, and we had to ford the many shallow streams that cross it. The road in some places is hollowed out by the passage of the water over it; large bushes of allang or wild grass and other weeds grow around luxuriantly, but no other vegetation is to be seen till very near to Djocjokarta, where they have commenced ploughing and planting a few fields again.

We arrived at the fort, in which the residency house at present stands, at 5 o'clock. I was heartily tired, and as the Resident told me we should not dine till 8, I undressed myself and laid down, in order to rest a little, but found it impossible to sleep, being too much fatigued and heated; we had been 12 hours on

the road, principally in the heat of the day, and travelled 42 miles, 14 in the carriage and 28 on horse-back,—a good deal for a tropical climate, when unaccustomed to it.

Djocjoharta, 1st August.—I accompanied the Resident this morning to pay a visit to the young Sultan in the Kraton. We proceeded thither in the state carriage, which is a clumsy, old-fashioned, but withal gaudy vehicle, something like those seen in old pictures, and probably half a century old, painted yellow without, and lined with yellow (the royal color) within, with a profusion of tawdry gilding, something the worse for wear. It was drawn of course by 4 horses; the coachman, a half-caste, had on a scarlet coat, and most imposing cocked hat—in another carriage behind was the interpreter, and some native dragoons preceded and followed us—this is the remains of the shew, which in former times was considered very important on similar occasions, and was carried much further than now.

The Passeerbaan, Alun-alun, or open court before the Kraton, appeared to me nearly as large, but the Banian trees with which it is planted, not so handsome, as they are at Solo; the interior of the Kraton is in a dirty neglected state, in want of repair in many places, and bearing the marks of poverty and decay. In several parts of these royal palaces, are small Passars for the sale of fruit, vegetables, cakes, tobacco, betel &c. to the followers of the Court, and here the ground is strewn with rotting leaves, and litter of various kinds, producing a bad smell and unsightly appearance.

We left the carriage, as usual, at the Sitingil or principal front entrance, and walked through several walled courts and passages, towards the great Pendopo or Royal Hall of Audience; this had evidently been handsome in days of old, at least as far as carved work, gilding and bright color could make it—of carving and gilding indeed there was a profession, but the latter was much tarnished, and the whole wanted a thorough cleaning; against the wooden pillars were suspended European mirrors and pier glasses, with shades for candles, but the stone floor was without carpeting, or even matting, except a small piece of rattan mat before the throne; this is a silver stool (*dampar*) with a velvet cushion on it, dirty as the rest, on the right side a smaller stool of the same kind, with the royal betel-tray and its appendages of silver gilt, covered with a patch-work cloth—on the left side an old fashioned rattan-chair stood for the Resident, and rows of other chairs stood in right lines at each side. The Sultan is a boy of about 9 years, with a rather handsome face, and large intelligent eyes, rather of a dark complexion; when we arrived at the Pendopo he was not there, but came out of the inner apartment, carried on the back of one of the Princes, like a mere child, which in fact he seems to be, in all but age. Of course there could not be much form observed in our salutations—he

cannot speak a word of Malay, which is the universal medium of conversation between Europeans and Javanese ; he could not therefore answer our inquiries, otherwise than by a nod or a smile. The Resident took his hand and walked with him up the Pendopo to the throne, where they seated themselves, and the Princes, the interpreter and myself did the same on the chairs that were arranged on each side ; a whole crowd of women, principally what the French call *d'un certain age*, and badly dressed, followed the young monarch, and seated themselves on the ground behind and beside his stool—some of these bore arms, being the guard of the interior ; fowling pieces in cloth cases, swords, crisses and spears, all sheathed and covered with cloth ; slippers, fans, boxes, a silver basin and water jug, with several other requisites “ too tedious to mention.” The Sultan was dressed in a long Kabaya, or morning gown, of crimson silk, flowered, under which he wore a white badju or vest, clasped at the throat and down the middle with diamond buttons, and the sarong or petticoat, which was quite loose, and shewed his bare legs under its folds, on his head a white batik or painted handkerchief.—He sat a few minutes quietly enough on the throne, but soon began to get tired of this, and amused himself by playing with the Resident's cocked-hat, and pulling at the buttons and embroidery of his uniform, which he had not seen before:—presently an old table was brought, and placed close before the seats of the Sultan and the Resident ; this was covered with a coarse cotton cloth and various fruits, sweetmeats and tea were placed upon it by the attendants, who made a salam every time they approached with the dishes &c. The young Prince was apparently hungry, for he began to attack the fruit and cakes before they were all arranged on the table, and without troubling himself about the Resident and the rest of the party, to whom tea &c. was then offered by the chiefs present—among these were the two guardians, one of whom is the brother of the late old Sultan, who was deposed by the English in 1812, banished by the Dutch to Amboyna in 1816, and reinstated in 1826, in the hope of terminating the troubles by his influence.—This hope was disappointed and in one respect the recall of the old Sultan produced rather an unfavorable change in the state of affairs, for it disgusted the brave chief Sosoro di Logo, who had been fighting against the rebels for us and the young Sultan, but went over to them when the old one was reinstated, and became leader of the insurgents in the interior of Rembang, where the Dutch troops suffered greatly—he is still among the rebels and attempts to bring him back have hitherto failed.

The other guardian is a son of the old Sultan, and great uncle of the present. These are the third pair of Guardians that have been appointed—the two first are now leaders of the rebels, and their successors were waylaid and murdered by them in July 1826.

The Sultan continued eating fruit and sweetmeats, without ceasing, from time to time lounging over the table, laying his legs and then sitting upon it, reaching over to take an orange or plantain that struck his fancy, and throwing the peeling around him, without troubling himself where it fell, even the Resident had a share of it—in short, he is evidently a spoiled child, to whom nothing has been taught, not even the common decencies of life, or the forms even of Javanese society. He seems never to be checked or controuled by his guardians or the other chiefs, all of whom pay him the same awkward respect and homage as they would were he of age—this is prescribed by Javanese custom, but if the Sultan, being thus early accustomed to the uncontrouled gratification of every caprice, should hereafter turn out a wanton tyrant, it will be a matter of regret, but not of wonder. He seems to be endowed with good nature, quickness and intelligence, and with proper tuition, he might doubtless become fitted for his dignity, but at present he rather disgraces it—the son of a minor chief would behave more decorously.

While the table was uncovering, he helped himself again from various dishes, and snatched an orange from the last plate as it was carried away past him.

We proceeded afterwards to visit the Sultan's in their apartments, which are all separate, and the young prince accompanied us. We saw the Ratu Mas and then Ratu Kenchono (Golden), both widows of the deceased old Sultan, and who had accompanied him in his banishment to Amboyna; the latter is a woman of a violent, determined character, and is said to have been the only person in Java of whom Marshal Daendels, himself the terror of others, stood a little in awe—there is nothing very remarkable in her person or manners. She sat with us on the floor or rather the raised platform on the floor of her apartment, covered with mats and cushions, and conversed familiarly with the Resident. She was dressed in a very plain style, in colored cotton, her short gown covering her neck and arms entirely and fastened at the throat by diamond buttons—this description may apply to both the Queens, as well as to the Ratu Sultan, or grandmother of the young prince.

Their apartments were the reverse of splendid, exhibiting nothing of that oriental magnificence one reads of in Eastern tales; they were out of repair and dirty, the painting worn off, the furniture (such as it was) out of order, and the marks of negligence and poverty everywhere apparent; at the back of the room, where we sat, stood several beds, both European and native.

We did not see the Sultan's mother, Ratu Agan, who is said to be handsome, and like her son; she was indisposed, we were told.

After taking leave of these ladies, who each entertained us with tea and fruit, we accompanied the Sultan to look at his horses,

each of which was in a separate Gadogan or wooden stable; he amused himself by feeding some of them with grass and trying to frighten others, talking almost unceasingly in Javanese. While going to and returning from these different places, he totally neglected the usual rules of court etiquette and his place in the procession, now running in front from under his great gilt umbrella, then loitering behind us, to look at all he saw or speak to some of the suite, who all retreat respectfully as he approaches. From the stables, we were conducted to a building which had lately been furnished in imitation of the European style for his amusement; here there were tables, chairs &c, looking glasses and pictures, many of the latter duplicates, and all in wretched condition. Here again we found a table filled with fruits and sweetmeats, from which the Sultan once more supplied himself. Among the requisites of an European house, they had unfortunately forgot the ceiling, so that the bare rafters and shingles were visible overhead. We now returned to the great Pendopo, and took leave of His Highness. The guard in the outer court was kept by European soldiers; some half dozen of the royal troops, no two of whom were dressed alike, stood here and there to present arms for the Resident.

Djoejokarta, 2nd August.—Late last evening the Resident received a message from the Sultan, that he would come to breakfast at the residency house this morning. About 9 o'clock, accordingly, a part of his train arrived, consisting chiefly of the women we saw yesterday at the palace, with all the insignia and paraphernalia attached to the royal person, including the silver stool or throne, which was placed on the floor in the centre of the hall. Attendants of all descriptions continued arriving till the open space in the fort before the residency house was filled with them; at last came the little Sultan himself on horseback, followed and surrounded by the Princes on foot, except his younger brother the Pangerang Anom, a fine little boy of 8 years, who was also on horseback. Their horses were held by 2 attendants, one on each side; the Sultan's pony had on an elegant saddle cloth of a dark colour, richly bordered with gold embroidery and a plain English saddle instead of a Javanese one.

The Sultan, who was a dishabille yesterday, had to-day a kind of state dress on, his upper garment or coat was of black velvet, reaching nearly to the knee, something in the cut of what is called, I believe, the Flemish jacket, with diamond buttons; under this, as usual, a white vest and short pantaloons of colored silk; he had neither boots nor shoes on, but black silk stockings full of holes; and a sarong or loose petticoat with a train which was not carried after him, but allowed to drag along the floor or tucked up behind his kris. Besides this indispensable weapon, which sticks in the girdle behind, he had a short sword by his side, with gold hilt and sheath set with diamonds, his girdle was also of gold, in front

ornamented with chased work and diamonds; on his head, above the turban handkerchief, was a hat of a peculiar form made of black velvet, with points resembling asses ears on each side of the crown, a very large shade in front and a long tail of black velvet hanging down behind,—this hat may only be worn by those of high rank, it must be very heavy and warm to the wearer. The young Prince was dressed much in the same manner but his baju or jacket was of yellow satin, and he wore no sword but only the kris, which was half as high as himself. The Resident received them at the steps in front of the house and led the Sultan in, while I conducted his brother by the hand. The former immediately ran about the house, looking at, and pulling about the furniture &c; a pair of globes amused him a few minutes, not in examining them but turning them round and round he then jumped on the sofas to look at the pictures and put several questions regarding them, especially some representing battles, of Waterloo and others, of what nations were the combatants, who gained the victory &c. The French table clocks next drew his curiosity; he took off the glasses that covered them, turned them round and round, viewing the works and making them strike the hours one after another; in all this his attendants assisted but never checked him. A pair of the porcelain vases with French artificial flowers pleased his fancy, and he ordered them to be carried to the palace, without asking any one, which was done immediately.—This freak of his will oblige the Resident to address a letter to the Commissioner General, for authority to write the flower vases off the list of the furniture &c. of the Residency house, which is the property of Government. When breakfast was announced, the Resident asked the Sultan whether he chose the silver stool, or a chair to sit on, he preferred the latter, perhaps because the throne has no back and he is less at his ease on it; the Resident seated him at his right hand, and the Princes placed themselves, about 10 in number, at table with us. Before the company was all seated, however, his hungry highness had attacked the nearest dishes and while the Resident was helping him on one plate, he helped himself on another, and continued eating the whole time from the two plates before him. He took very little wine; when the Resident filled up his glass with claret, he first sipped a little of it, then weakened it considerably with water, and at length drank water only; he sometimes threw a piece of fowl &c. from his own plate into that of his little brother, who sat next to him, and was obliged to take it respectfully. I thought the manners of these Djoejakarta Princes not so polished as that of the Solo court; they seemed to eat very heartily, not to say greedily, the whole time we were at table, and scarcely spoke a word to each other or to us; when I offered anything to those on each side of me, they always accepted it without thanking me

some of them eat with their fingers—the elder guardian affects a little reserve and polish in his address, but in general these courtiers are awkward and ill-bred, compared with those of Solo. Some of them can drink very deep, and others use opium, but these bad habits are common, I believe, to both Courts. When the Sultan had satisfied his appetite, he ran from table before breakfast was over, and recommenced his survey of the house, going into all the bed-rooms, and at last up a ladder to the garret, or roof, where he stayed some time, with part of his train—having satisfied his curiosity and tired himself, I suppose, he ordered his horse to be brought, was lifted upon it, and went away without taking leave of the Resident or any of the party, who accompanied him to the door, his numerous train preceding and following him as before.

When they had all left the fort, the carriage of Paku Alum arrived to take the Resident to the *dalam* or palace of that prince, who is independent of the Sultan, as Mangko Negoro is at Solo of the Emperor—the Resident had sent word yesterday, that he would pay a visit to the Prince this morning, and now asked me to accompany him. On our way we passed over the only bridge in this district that has not been destroyed by the rebels, and this is so decayed that the carriage actually danced as it went over. This vehicle is an English-built chariot, no doubt a handsome one when new, but like every thing these princes have, much neglected and in bad order. The outside was gaudily painted in the Javanese taste, and the coach-man, as usual, was as gay as scarlet coat, cocked-hat, and tarnished lace could make him. The *Dalam* of the Pangerang Adapati or Prince Paku Alum, is at a short distance from the European town, and has formerly been handsome, there is much ornamental brick and plaster work about the Courts, and the *Pendopos* or halls are gaudily ornamented with carving, gilding, and painting—myrtles and other ornamental trees, besides the graceful *waringin*, are planted singly in and round the Courts, and rows of trees in the walled walks leading to the road, at each side of the *dalam*.

The Prince is an old and rather infirm man, with a pleasing, open expression of countenance—he spoke to us in the Malay dialect of Batavia, where he had been in former times. His wife sat with us, at his left hand, and next to her were the wives of two of his sons, one of whom had an interesting countenance and delicate features, but a grand-daughter of the Prince, yet unmarried and of whom we only had a momentary view in taking leave, was really a pretty girl, and probably would be thought so even in Europe; a grandson of the Prince served him and his company with tea, plates of fruit &c, according to Javanese forms, which exact the greatest shew of reverence from the younger towards the elder branches of the family, although when the former are grown up, the latter have seldom much influence over them. This grandson wore a

European cavalry uniform, with silver epaulettes, which made his attendance on us somewhat ridiculous in European eyes. We sat and talked with the Prince and his family more than an hour, and in taking leave the Resident asked permission to walk over the ground within the dalam wall. This was for the purpose of selecting a spot of ground in the Prince's plantations, to build a small house on, as a retreat from the noise and gloom of the fort, the Resident's country house having been utterly destroyed by the rebels, and it being unsafe at present to live even at a small distance from Djocjokarta, the environs being still infested by roving bands. We accordingly walked through the grounds and chose a spot near the road and the wall, in which a piece of cannon is mounted, and whence a fine view is obtained over the rice fields and distant hills. The Prince's son, who accompanied us, was informed of the Resident's wish and undertook to propose it to his father, who, he said, would gladly consent to it, the grounds being much larger than was necessary, and that part not in use, as we saw by a gateway leading to the road being walled up.

We then returned to the residency and I assisted the Resident in sketching a plan for this new house, which is to contain only 2 rooms and 2 closets, besides a hall in the centre and a verandah all round, it being only intended for a temporary retirement while the country remains in the present disturbed state.

In the afternoon we took a short walk as usual. At the distance of less than a mile from the fort, in a long and beautiful avenue of Banian trees on the former high road to Solo, the Resident pointed out to me a pillar or obelisk of brick and mortar, placed there formerly as an ornament or point of view, such as there are many in the vicinity. This is called the "witte paal" or white post and is now an object of interest and terror, from the many murders that have been and are still now and then committed near it on unwary soldiers and other inhabitants of Djocjokarta, who venture there singly or in small parties, by the spies and partisans of the rebels, and sometimes, it is said, by strolling robbers belonging to the place itself. We dared not go even half way towards it, as an European soldier was killed while walking in this way about a month since; he had loitered behind his comrades, who escaped.

Djocjokarta, 3rd August—This evening I accompanied the Resident to pay a visit to the Radin Adipati or minister of state. He introduced us to his two wives, one of whom is of royal blood, being a daughter of the old Sultan; we only remained a few minutes in the women's apartment, and then seated ourselves in the Pendopo, or hall of audience, which appeared a handsome one in the Javan style, as far as I could judge by the light of a very few tallow candles that were scattered about it. This apartment seemed about 40 feet square and the ceiling, as usual, was handsomely carved and gilded in the centre. The Minister entertained us with

ten, fruit and cakes, and with the music of the salendro; he seems rather an intelligent man, and the Resident informed me that he is considered faithful to government and a well disposed, but not very active Minister.

Djocjokarta, 4th August—We were invited to dinner at the Sultan's this evening to celebrate the monthly anniversary of his birth. We proceeded in His Highness' carriage at $\frac{1}{2}$ past 6 to the palace, where the native band strack up at our entrance a lively air; the state Pendopo and the court in which it stands, were pretty well lighted with muttons and in the latter a kind of fancy illumination had been made. His Highness was amusing himself in a singular manner;—he was assisting or rather obstructing the attendants who were arranging the table for dinner, outside of the Pendopo, under a kind of shade made of split bambu work. He came to welcome the Resident, however, and gave his hand and a nod to each of us in turn; we walked about the court till dinner was on table. The Sultan seated himself on a very large old fashioned fauteuil and called a little boy somewhat younger than himself to partake it with him. This was an illegitimate brother,—his own brother, Pangeran Anon, sat on the other side of him and he seemed kind to them both, giving them a part of what he took for himself; they all did justice to the dinner and ate most heartily. The Sultan had 2 and sometimes 3 plates before him which were never empty; they used forks for fowl &c. and spoons for rice, but knives seemed useless to them, they divided the meat with their teeth. We drank the Sultan's health with three cheers, in which he joined with all his might, then that of the Ratus or Queens, the Resident's, the guardians, the other Princes of the court &c. The dinner consisted almost entirely of European dishes and was abundant, though not well dressed. Under the table sat a number of women at and round the Sultan's and his brothers' feet; when they had nearly finished their dinner they began playing with these women, throwing whatever they could lay their hands on, to and at them, getting under the table and scrambling among them, playing hide and seek with each other and numerous tricks on the company.

This at last began to tire us, and the Resident proposed to adjourn to the Wayang Kulit or *ombres Chinoises*, which had been prepared in the Pendopo, behind the dinner table—this amused the Sultan only a few minutes, he ran back to the table with his two brothers, seized a bottle of wine and helped them and himself to several glasses of it successively, calling for more, like an old toper in a tavern, pouring it over the table cloth and his and his brothers' dress, and imitating our cheering at the toasts, which seemed much to amuse him. All this time he was checked in nothing by any one, but was followed and attended most obsequiously by a crowd of chiefs and dependents of both sexes, who whatever his childish caprice dictated,

REVIEW.

A VISIT TO THE INDIAN ARCHIPELAGO IN H. M. S. "MÆANDER."

By Captain the Hon. HENRY KEPPEL, R. N. 2 vols. Bentley. 1833.

As a rule, books written by naval officers always afford us some amusement, if not instruction. We readily allow that our naval officers have increased our stock of useful knowledge, but that the naval profession "has increased useful knowledge more than all other professions" is a claim which no landsman can ever admit. Even our geographical knowledge owes less to the naval profession than is generally imagined; and it necessarily must be so, sailors in general view but the coast line, and have few opportunities of penetrating into the interior; their stay at any one place is usually very limited, they see much, but have only a cursory view of what they do see. Although we cannot admit Captain Keppel's sweeping claim for his profession, we are well aware of the services they have rendered even to the pacific arts. Having entered this caveat we leave the preface.

All our local readers are aware, that the "Mæander" was commissioned for service in these seas, and brought out the Labuan Establishment. We well remember Captain Keppel's arrival; his frigate was anxiously expected, as her advent was supposed to be the forerunner of a more active and consistent policy in the Archipelago, and her presence was hailed with pleasure when she cast anchor in our roadstead.

Captain Keppel judiciously passes rapidly over the voyage out, but at Singapore he detains us pleasantly with a sketch of our settlement, truly the wonder of the East. He notices the loss of life occasioned by the tigers, and well he may do so,—it is the scourge of our island and tends greatly to diminish cultivation; in fact, we are more surprised that the Chinamen venture to dwell at all on the skirts of the jungle, than that they should abandon their plantations.

Captain Keppel, we remember, was enthusiastic about New Harbour, and this is what he says of it:—"While preparations were making for the establishment at Labuan, the "Mæander" refitted in the snug and picturesque New Harbour, which appears to have been overlooked in selecting the first points of settlement; the only objection to it as a harbour is the intricacy of the Eastern entrance; a difficulty which, by the introduction of steam, has become of little consequence. No place could be better adapted for a coal depôt, and as a harbour for a man-of-war to refit, it is most convenient. The forge can be landed, boats repaired, and the artificers employed under commodious sheds, and all under

the immediate eye of the officers on board. It has another great advantage over Singapore roads; in the latter anchorage a ship's bottom becomes more foul than in any other that I know of,—perhaps from the near proximity to the bottom; this is not the case in New Harbour, through which there is always a tide running. Although it has the appearance of being hot and confined, surrounded as it is by high land, we did not find it so in reality; generally there is a current of air inside, while the ships in the stagnant and crowded roads are often becalmed."

Captain Keppel takes a real interest in the Archipelago, and has acquired much knowledge of it. He has a pleasant way of imparting what he has acquired, and we only regret that he has not given us more of his personal experience and personal observation. Captain Keppel tells a story as well as any man, and it is a pity there are so few in the book. The "Mæander" does not, we think, hold a sufficiently prominent place in the narrative, but however that may be, all will be pleased to run through it. It is in general light, sketchy writing, though sometimes when Captain Keppel warms in his argument and enters resolutely into the defence of Sir James Brooke, there is greater fulness and a sarcasm which is very biting. We shall notice at the end a few faults which have struck us in the construction and management of the work, but at present we follow the narrative.

Of Sarawak we shall presently say a few words,—we proceed now to Labuan. Capt. Keppel conveyed Sir James Brooke there and witnessed the formal opening of the colony. We are rather surprised to find Captain Keppel fall into the error, that the sickness of Labuan might have been caused by exposed coral reefs in the vicinity of the harbour, when it is quite certain that there are no exposed coral reefs there: but from whatever cause the sickness arose, there can be little doubt that it affected the prosperity of the colony. The hopes that were then entertained by many that the establishment of Labuan would be very beneficial to trade and British interests have been grievously disappointed. Whatever the causes may be, there can be little doubt that Labuan has failed; it may be the fault of the Home Government who have utterly neglected it, or the inactivity of the Coal Company who promised so much, or it may be its nearness to the capital which has prevented trade flowing there,—but whatever the cause, we must repeat that Labuan has as yet failed. And this result has disappointed us greatly, as we looked forward to the success of Labuan as the first stepping stone to further British interests in the Archipelago.

The case however is by no means hopeless; Singapore is the centre of steam navigation which is continually extending its operations. We must have coal; our demand already amounts to nearly 60,000 tons annually; year by year we shall require more;

therefore whatever may be the fate of Labuan, it will always be of importance to us for its coal.

Sir James Brooke having caught the Labuan fever, and suffering very much, resolved to take a sea voyage, and in order to combine business with the recovery of health proceeded in the direction of Sulu. Among other places at which Captain Keppel touched was Cagayan Sulu; he there visited a remarkable lake, his account of which we shall extract; it is rather long, but as it affords a very good specimen of Captain Keppel's descriptive style, we trust our readers will excuse the length in consideration of this very picturesque passage:—

"On the 17th we came to in ten fathoms about a mile off the south side of Cagayan, and immediately commenced our examination of the curious circular lake before mentioned, of which we had reserved the examination for this opportunity. The entrance is by a gap about fifty yards wide; this, however, is crossed by a bank of coral, which extends along the whole south coast, and at low water is nearly dry, so as to exclude any boat larger than a canoe. Just outside the middle of the bar was a small island of rock and sandstone, with a sufficient shelter of bushes to make an excellent shaded spot for our pic-nic. On passing the bar we found ourselves inside a magnificent circular lake of deep blue water; its circumference was about three miles. It was completely encircled by sandstone cliffs, upwards of 200 feet in height and nearly perpendicular; their sides were covered with trees and shrubs. In the natural barriers of this remarkable enclosure only two small breaks occurred, one was the gap by which we entered, the other was on the E. N. E. side.

"From the inside, the little island at the entrance had all the appearance of having once filled the gap, and looked as if it had been forced out into the sea by some internal pressure. The break which I mentioned on the North E. side did not come lower than within seventy or eighty feet of the water's edge, and was partially concealed by the thick foliage of the jungle and forest trees. In sounding, we found the depth of water to vary from fifty to sixty fathoms, and it appeared to be as deep at the sides as in the centre. Nothing could be more beautifully luxuriant than the growth of the jungle trees of every description, their trunks and branches covered with an endless variety of beautiful creepers in brilliant blossom, hanging in festoons to the very water's edge. Over our heads, disturbed by such unusual visitors, numbers of pigeons flew to and fro; while many varieties of the parrot screamed their remonstrances at our intrusion. Forming ourselves into small parties, we dispersed. Some to haul the seine, some to search for shells, while a third party explored the gap on the North-east side, clambering up without any anticipation of a further treat that was in reserve for them. At a height

of about ninety feet, another beautiful lake burst on their astonished sight, circular in form, and as nearly as possible similar to that which they had just left. The two lakes were separated by a sort of natural wall; and the spectator standing on its narrow edge could, by a mere turn of the head, look down either on the inner lake at a depth of thirty feet, or on the outer eighty feet beneath him, almost perpendicularly. The water of the higher or inner lake was perfectly fresh; but it may be observed that while it is called the *inner* lake, because we approached it *through* the other, it is, in fact, very little further inland than the first.

"This grand discovery being communicated to the other rambling parties, curiosity became here concentrated. Men and axes were procured from the ship; the trees were cut down, and a road made up the gap, and so over to the fresh water lake. A raft was then constructed, and together with a small boat belonging to the tender, was very shortly launched upon the upper water.

"Our operations soon drew some of the natives to the spot, who expostulated on our proceedings, informing us that the waters of the lake were sacred, and had never yet been desecrated by the presence or by the pressure of an earthy canoe; that the spirit of the lake (by description a fiery dragon of the worst order) would not fail to manifest his displeasure at the innovation. These scruples were, however, got over by one of them, after he had swallowed a glass of grog.

"It was not until we were afloat on the inner lake, that we were enabled to form a correct idea of the beauty of its encircling barriers, and of the luxuriant vegetation which graced them. We had then also the best view of the extraordinary gap through which we had passed into it. The sandstone cliffs were more perpendicular on the fresh-water side, assuming the appearance of massive masonry; and the gap might be a large portal, a hundred feet in height, broken through the immense stone wall. The creepers also were hence seen to great advantage, some of them falling in most beautiful luxuriance the whole length from the summit of the surrounding heights to the water's edge. The lake may at one time, by some convulsion, have risen and burst through its barriers at this spot into the lower basin: which in turn may by a similar process have formed the gap in the outer side, and then subsided to its present sea level. Such was the appearance it had to us.

"Taken altogether, we had certainly here presented to us a great natural curiosity. I should have added that the cliffs on the lake's side were intersected at regular distances by a stratum of conglomerate; and the whole scene was so novel and so peculiar as to render description difficult. The natives having spoken of other similar lakes at no great distance, we explored in the direction to

which they guided us, but made no new discoveries. The sacred bottom of the lake was dredged by the conchologists of our party, but without finding any shells.

* * * *

"A ship may obtain good fresh water from a small trickling stream, which permeates through the barrier, near the gap into the basin below; but it should be so arranged that the laden boats pass the coral reef off the coast before the tide falls too low." Vol. I. page 82.

When the "Mæander" arrived at Sulu, the people of the capital were in great alarm. The last visit of a man of war was too well remembered, the Dutch having enforced their demand by heavy discharges of round shot. However, there was more noise than damage, and had not the hostile visitors burnt down the most peaceful part of the town, namely the Chinese quarter and Mr Windham's houses, their intended chastisement would have been laughed at. Their thirty-two pound shot were brought alongside for sale.

Captain Keppel's sketch of his visit to Sulu is interesting; he met the Sultan, a heavy, dissipated looking young man, and Sir James was well enough to enter a little into business and prepare the way for the treaty which was concluded in the following May. Not that the treaty was of much avail, as our Government has abandoned all interest in the further East. The Sulu question is rather a delicate one. Sulu has for many years been the market where the Lanun and other pirates disposed of much of their plunder, and in former times was decidedly piratical. Indeed at the present moment, among its mixed population are some of the greatest scoundrels in the Archipelago. The present Sultan, however, had given no open encouragement to piracy, and had in fact done much to repress it, and had Sir James been allowed to carry out his policy, he would have gradually weaned the population of that Archipelago from their marauding habits. But of this we may be certain, that had not the Sultan of Sulu entered into a treaty with the English, the Spaniards would have given him little trouble, but in this consisted his crime; he had dared to repudiate the Spanish claim of Suzerainty and therefore he was made to feel their vengeance.

Captain Keppel remarks on the slight efforts, in comparison with Spain or Holland, that we have made for the suppression of piracy; but in fact piracy is seldom brought home to us in our own ships, for we have little direct trade with the natives of the Archipelago; what trade we have is principally carried on in native craft; native merchants bring their produce to our emporia, and our home authorities care little about the losses they suffer. Few reflect on the great stop that is put to trade by a fleet of Lanuns cruising in the Karimata passage; we may complain, but

our wise friends at home cast their eye at the balance sheet of last year's trade and exclaim, "these Singaporeans are never satisfied." Year after year our commerce is cut up by pirates of all descriptions, Chinese, Lanun &c. &c., but few efforts are made to check them. The produce that finds its way to Singapore is but a tythe of what would reach us if combined and efficient measures were taken by the Dutch, Spanish and English governments. The Spaniards in their own neighbourhood are rather active, but their gun-boats are inferior in speed to the Lanun and Baliniui war-boats. The Dutch have done more, but not so much as we could have expected. We have by fits and starts attempted a little, but irregular efforts are not of much avail.

From the Archipelago Captain Keppel sailed for China, and then occurred that unfortunate affair about Mr Summers at Macao. We had previously been doubtful how far Captain Keppel was justified in his conduct, but we are now almost inclined to say that he could not have taken a better course; it was a bold proceeding, and our principal regret is that it should all have been caused by the silly bigotry of a boy.

The position held by Portugal at Macao is very contemptible, much better would it be for them to abandon it altogether, than keep the place on sufferance; we have yet to learn of what profit it is to them. Probably as the last remnant of their once proud position in these seas, they are loath to abandon it.

At page 122 we have an account of the "Mæander" on a reef; if all stories be true it is rather a favorite position of Captain Keppel's, but there is no doubt that if he does get occasionally "*into a fix*" there is no officer knows better how to get out of it; we have heard various accounts of this particular fix, and we will venture to say that there is not an instance of greater smartness on record; but Captain Keppel is a favorite Captain and always has a good crew.

The rest of the first volume we intend to pass over; to those who come fresh to the subject it will be interesting; it is convincing to all who approve of the recent proceedings in Borneo, and we think Sir James's friends will be satisfied with the defence. To his enemies, and no man has had more bitter opponents, it will afford some employment. For ourselves, we candidly confess that we are utterly weary of the subject; we have enquired and we are satisfied, and were it in our power we would never read another line about the Serebas or the Sakarran Dyaks, never listen again to any arguments for or against; arguments! did we say, (oh shade of Aristotle forgive us!) and if ever any man broaches the subject again in our presence, we shall be rude enough to interrupt him with a Johnsonian quotation—

"Come my lad, let's drink some beer."!

The second volume opens with some remarks on Sarawak, to

which are appended a few extracts from a private journal kept by Sir James Brooke.

Anything relating to Sarawak is willingly received by us: as, whatever may be the various opinions respecting Sir James's proceedings against the Dyak pirates, all are agreed in admiring the energy and prudence displayed in developing the resources of Sarawak.

There is nothing in history to be compared to it; other founders of governments have been enabled to display more energy in war, —others have more quickly succeeded in rearing dazzling structures, but we question whether any result is more astonishing or gratifying than what may be now witnessed on the banks of the Sarawak. The story of Sarawak has been often told, and most of us are familiar with the salient points in Sir James Brooke's life; we have no intention of repeating the oft told tale, but we have great curiosity about Sarawak. We trust our readers will permit us, with the aid of Captain Keppel, to say a few words respecting this rising place, about which so much has been written. Recent discussions have brought to light many facts relating to Sarawak regarding which we were previously ignorant.

The real province of Sarawak extends from Tanjong Datu to the Samarahan river, but within the last three years the Sultan of Borneo has placed the whole coast as far as Tanjong Sirik, under Sir James's government. The Government of Sarawak appears to be carried on by Sir James as the head or Rajah; under him are several English gentlemen who assist in the various details; over the Malay population of Sarawak proper are the regular native chiefs, as in every other Malay community, and called there the Datus Patinggi, Bandhar and Tumunggong; then over each division of the town are the regular heads of Kampongs; the strangers who have flocked to this safe river and strong government, generally build together and form separate Kampongs under their respective heads. In the town there is also a large Chinese quarter, consisting of one broad street, half a mile long, on the right hand bank, with branch streets diverging. The European houses are built on the left bank of the river and at the back of the town. In the interior are about thirty Dyak tribes, varying in strength from twenty to two hundred families; each of these is under a head named an Orang Kaya.

Justice is administered in a small court house erected in the centre of the town, between the Malay and Chinese portions. Captain Keppel gives some interesting cases from the records. We are tolerably familiar with Malay countries, and we can scarcely imagine how Sir James has been enabled to carry on his court, among a population who before had never heard of equal justice between the powerful and the weak: how men who had all their lives been accustomed to seize with the strong hand, and

plunder with impunity the aboriginal races, and to oppress their own weaker countrymen, selling as they did freeman as slaves, could have been brought to submit to the decrees of a court. Had Sir James been backed by a regiment, we could readily have understood it, but we know he was single handed; in our admiration, however, for this display of courageous perseverance, we must not forget to pay a tribute to the character of the people themselves. They must have fine qualities to appreciate so readily the character of their new ruler.

The court sits nearly every day to hear complaints and to decide cases, but what has struck us most is the little interference of government, and the absence of crime. We have been at some pains to enquire into the statistics of crime in Sarawak, as we expected from the large and sudden influx of Chinese from Sambas that there would be a great increase. Of capital crimes since October 1850 there have been but three, and all these caused by jealousy; one a Dyak, the only case on record in which a Dyak has committed a cold blooded murder; and the two others were Malays. The Chinese commit no crimes beyond petty stealing and cheating. Sarawak has fortunately no Hués to prevent the cause of justice. We extract the following from Sir James Brooke's journal.

"I was only three whole days at Sarawak; and during that time I had to renew my enquiries into the operations of the secret societies among the Chinese. When there a month before, I called together all the principal men, told them I was acquainted with the endeavour to get up a Hué or Fué, and warned them of the consequences. The Government of Singapore, which judged by English laws, could not act (I said) against these societies; but at Sarawak they would find it different; for justice was more speedy, and looked less to forms of procedure.

"This and much more I said. Let them beware, I concluded, and stop in time; for I would gain evidence against them, and should not hesitate to punish so great a crime as setting up a secret society to overawe the Government and to terrify their own countrymen. It could not and should not be allowed.

"On my return I found that the warning thus publicly given had had no effect; and that a few individuals, *all from Singapore*, were active in enrolling members, and by persuasion and threats inducing or forcing the Sambas Chinese into the society. An ambassador from the Hué in Singapore had come over; two or three respectable men were busy in the cause, and several of a poorer class were active agents and emissaries. *In private* this was readily stated by many of the Chinese, some Sambas Chinese, some Malacca Chinese, some from up the country, and some living at Kuching.

"This testimony was given to different persons by witnesses not even acquainted with each other, and who could have no object in making the statements they did. There could be no suspicion

of collusion; the evidence was clear, consistent and conclusive as to the general fact and the guilt of particular individuals; and yet not one of these witnesses could be induced to come forward in public; they all declared that it was as much as their lives were worth; that I had no power to protect them. In Sarawak, in Singapore, in China, wherever the Hué had its ramifications, there they would be put to death. The system of intimidation however managed, was complete, and the only option was to allow the society to increase and flourish as at Singapore, and gradually to assume all the functions of government, with more than the terrors of government; or to strike at it in its infancy, and to assure the members of the inquisition, that they were not safe in their own persons, whilst acting against others.

"I did not hesitate long; I resolved to get rid of a secret inquisition, which would subvert government, pollute the springs of morality, and shake the very foundations of society, even at the expence of the forms of justice. If this society were permitted to exist there was an end of justice in the country. To convict by proceeding openly was impossible; conviction would only lead to the simple fact of the existence of an illegal society; it would not end the society, any more than the conviction of one or two of its members for crime would deter the others from committing the same crime, under the obligation of oaths, and from a sense of mistaken duty. The existence of this secret society was opposed to the administration of justice, and therefore I resolved to strike at the embryo of the lurking hydra. I seized two active agents, and summoned about a dozen others,—at the head of them Kayun, the ambassador from Singapore. The court on the following morning was crowded with Chinese and Malays. The datus and the magistrates were present, and all after some consultation agreed with me, the majority wishing to go much further. First we had up Kayun, Achin (a Singapore man) and another respectable shopkeeper. I addressed them as follows:—

"I have called the people together on the subject of the Hué which the Chinese are establishing in this country. We all know what this Hué is; and if once we let it arise amongst us, we shall have two governments in Sarawak, the one doing justice and punishing openly in this court, the other dealing in the dark and punishing men secretly. This can never be permitted; and it would be better to drive every Chinaman out of the country, than to allow them to form a secret society, from which no man would be safe. In Singapore the Hué exists, but the Government of Singapore does not know how to deal with such societies.

"In Sarawak the Government is strong, and these Hués cannot exist. I have before warned the Chinese to desist from forming a Hué: I told them it would lead to great troubles, and that those guilty of entering this society would be punished, and put to death if necessary to deter others. They have not listened to the advice

then given; and now they shall see I am always as good as my word; and this Court, for the sake of all the people of the country, will exert its full authority to suppress a very great evil. In the name of the Court, I tell the Chinese concerned that if the punishment now awarded is not sufficient, on the next occasion all of them concerned shall be put to death. Kayun, you are the head man of this Hué; you have come from Singapore as a deputy from the society to establish their laws in Sarawak. You think you are safe, because you can frighten your countrymen from coming forward to give evidence; but you are not safe; and as you work in the dark against this Government, this Government will work in the dark against you. As you terrify others, so this Court will terrify you; as you strike against others in secret, so this Court will strike you in secret. As the head man your crime is worthy of death, and therefore prepare yourself. Let him be taken to the fort, and there kept till the Court decides his final sentence.'

"The two others were fined a hundred dollars each; to be put to death if brought up again.

"Assan and the blacksmith were ordered two dozen and imprisonment; the rest were warned and dismissed. Kayun's punishment was afterwards commuted to perpetual banishment and a fine of a hundred dollars.

"I believe the punishment gave great satisfaction amongst the majority of the Chinese, and I believe it was just though arbitrary and irregular.

"We are often in this world obliged to make choice between two evils; and I believe in this case I have chosen the lesser evil of the two.

"A secret society dealing with a strong hand, the members of which are bound by solemn oaths, can only have had its origin under a vicious government. Here, wrongs they have none; and a few bad men introduce the system, to gain power. By degrees they force or frighten numbers to join them; they become a secret government; their judgements are the judgements of darkness; it is a reign of terror; an offshoot of hell. I am content to have crushed it in the bud; and if an injustice has been done, it has been done to prevent a continued system of injustice, and to repress a great evil. The state of Singapore is a beacon to warn Sarawak."

Vol. ii page 126.

That is, we believe, that proper way to deal with Hués.

The Chinese are increasing in numbers, but as yet they principally confine themselves to gold washing and trade. In the town, the Chinese are erecting substantial houses, while up the country about 3,000 are occupied in gold washing. Few have turned their attention to agriculture, except gardeners, who supply their countrymen with vegetables. At Lundu, a district in Sarawak, there is, however, a purely agricultural colony of celestials, who having failed to find the precious metal by washing, are seeking it by planting.

To support this simple structure of a government at Sarawak a small revenue is raised by an opium farm, and a few lesser imposts; and in addition, a royalty is received on the antimony exported. Every man has perfect freedom to work the mines, and we have heard that even parties of Serebas Dyaks since 1849 have made a good deal of money by this employment. Sarawak is a free port and therefore flourishes.

We must give another extract from Sir James's Journal about cannibalism in Borneo. As far as it went, the evidence appeared trustworthy. It is now proved beyond a doubt that there are cannibals in Sumatra. People were as equally incredulous about that, formerly, as they are now about this assertion, but our readers can judge for themselves how far they will give evidence to the following Dyak testimony.

"The following is the testimony of three intelligent Dyaks from the interior, given during several months residence with us, in the most frank manner to be conceived,—as direct and unimpeachable evidence as I ever heard, offered sometimes when they were altogether; sometimes by individuals apart, in conversation with numerous persons. I examined them myself, and entertain no doubt of the correctness of these statements, as far as their personal knowledge is concerned. The witnesses themselves stated over and over again, with the utmost clearness, how much they *had seen* and how much heard. There was such perfect good faith and simplicity in their stories, as to carry conviction of their truth.

"The three men were named Kusu, Gajah, and Rinong; and stated as follows:—

"We are of the tribe of Sibaru; which is likewise the name of a branch of the Kapuas river. The tribe of Sibaru contains 2,000 (or even more) fighting men (*tikaman*), and is under the government of Pangeran Kuning, who resides at Santang, a Malay town on the Kapuas. We have none of us been up the interior of the Kapuas, where the Kyans live, but they often come down to Santang where we meet them. The Kyans are quite independent, very numerous and powerful; they are governed by their own Rajahs, whom they call *Takuan*. Some of these Kyan tribes are cannibals (*makan manusia*), it is generally reported and we know it to be true.

"Pangeran Kuning of Santang was at war a few years ago with Pangeran Mahomed of Suwite (*Suwight*), a Malay town situated on the Kapuas, between Santang and Salimbaw. A large force was collected to attack Suwite. There were Malays (*Laut*) of Santang and Sakadow, and the Dyaks of Sibaru, Samaruang, Dassar, and of other tribes; and besides all these, was a party of about fifty Kyans. We never heard the particular name of this Kyan tribe, for we did not mix with them, nor did we understand their language: Suwite was not taken, but a few detached houses were captured, and one man of the enemy was killed in the assault.

“Kusu saw these Kayans run small spits of iron, from eight inches to a foot long, into the fleshy parts of the dead man's legs and arms, from the elbow to the shoulder, and from above the ankle beneath the calf to the knee-joint; and they sliced off the flesh with their swords and put it into baskets. They carry these spits as we all saw, in a case under the scabbard of their swords. They prize heads in the same way as the Dyaks. They took all the flesh off the body, leaving only the big bones, and carried it to their boats, and we all saw them broil (*panggang*) and afterwards eat it. They ate it with great relish and it smelt, whilst cooking, like hog's flesh. It was not we alone who saw them eat this, but the whole force (*balla*) saw it.

“Men say that many of these interior tribes of Kayans eat human flesh—that of their enemies; most, however, they say, do not, and all of them are represented to be good people and very hospitable; and we never heard that they ate any other than the flesh of enemies. It made us sick to see them, and we were afraid (*takut*), horrified.

“This was not the only time we have seen men eat human flesh. The Dyaks of Jangkang are likewise cannibals. They live somewhere between Sangow and Sadong, on a branch of the Sadong river named Sakiam. The Jangkangs had been out attacking the Ungkias tribe; and after the excursion they came to our village with several baskets of human flesh, for they had killed two men. They cooked and ate this outside our house, but it had been broiled before. I knew it to be human flesh, for I saw one of them turning the hand (with the fingers) of a dead man at the fire; and we saw them eat this hand on the bank of the river, close to our house. We talked to them about it, and they did not make any secret of it.

“The Jangkang people, according to report, eat Malays or Dyaks, or any one else they kill in war; and they kill their own sick, if near unto death, and eat them. There was an instance of this at Santang. Whilst a party of this people were staying there, one of them fell out of a mango tree, and broke his arm, besides being otherwise much hurt; and his companions cut his throat (*sambilih*) and ate him up. None of us, however, saw this happen, but we heard it from the Santang people. It is likewise said, but we do not know it for a truth, that, when they give their yearly feast, (*makan-taun*) a man will borrow a plump child, for eating, from his neighbour, and repay it in kind with a child of his own, when wanted. We do not however, know personally anything beyond having seen them once eating human flesh; but we have heard these things and believe them; they are well known.’

“Sheriff Moksain corroborated this latter statement generally as he declared there was no doubt of the Jangkang tribe being cannibals; but he had never seen them eat human flesh; and Brereton likewise heard of a tribe in the interior of the Sadong

being cannibals. There is clue enough, however, to settle the point; and, without being positive in an opinion, I can only say that the evidence I have put down was as straightforward as any I ever heard in my life, and such as I cannot doubt, until it be disproved." Vol. ii, page 112.

We have taken our extracts at random, there are many passages equally suited to show the character of the book, but we wish to hurry on to Australia.

Captain Keppel devotes half a volume to Port Essington and our Southern Colonies. We have been much interested with his own remarks and observations about the natives in the north of Australia. He does not place them so low in the scale of creation, as has been the fashion with some ethnologists. The author of that clever but quackish book "*The Vestiges of Creation*" would find but few supporters for his theory among men practically conversant with the least civilized tribes. These aborigines are considered by Captain Keppel as remarkably intelligent, indeed the quickness with which they pick up languages is a proof of this. They make good seamen and can do more than many a white tourist,—they can give accounts of what they have seen. The question asked by one of them was remarkably pertinent. "If you English could thrash Bonaparte whenever you liked, why did you put him on an island, and starve him to death." Although his information was incorrect, the question shewed some thought.

We would willingly continue our extracts, but we fear we should be tempted to swell this notice to too great a length. We opened our article with a slight difference of opinion, we have now one or two faults to find; we think Captain Keppel is too fond of quotations—scriptural, classical and miscellaneous; as a rule they unpleasantly break the narrative and in an argument a poetical extract nine times out of ten weakens the effect. We do not object to the introduction of Sir James Brooke's journals, they are very interesting and characteristic, but we do object to the introduction of letters, extracts from journals, and miscellaneous notices, furnished by Captain Keppel's friends; they should have been condensed and embodied in the work if they were really required.

Captain Keppel need make no apology for entering into the field of literature, the chapters containing accounts of his own movements are always interesting, and his casual notices are often of greater value than those made by persons of greater pretensions. We can sincerely recommend these volumes; they have afforded us some pleasant hours, and the faults we have noticed do not detract much from the interest. We trust to welcome Captain Keppel again in these seas; the times promise to be stirring, let him come with a good squadron, do good service and then write another amusing book.

ERRATA—IN THE "JOURNAL OF AN EXCURSION &c." FEBRUARY
AND MARCH NUMBERS.

- Page 141 line 5 from top *for* Durbar *read* Dalm.
 " 145 line 17 from top *for* Luwu *read* Lawu.
 " 146 line 23 from bottom *for* Susunun *read* Susunan.
 " " line 20 from bottom *for* 182 *read* 1823 & *for* 3 *read* 39.
 " 150 line 19 from top *for* Burgolali *read* Boyolali.
 " " line 22 from top as above- [ing.
 " " line 2 from bottom *for* surroundering *read* surround-
 " 153 line 13 from top *for* Pagang *read* Pajang.
 " " line 17 from top *for* depos *read* dessas.
 " 156 line 8 from bottom *for* come *read* came.
 In the note underneath, 5th line from top, *for* is to
 said *read* is said.

THE
JOURNAL
OF
THE INDIAN ARCHIPELAGO
AND
EASTERN ASIA.

GRAND EXHIBITION OF BATAVIA IN 1853.

THE brilliant success of the Grand Exhibition in the Hyde Park of London, open to the World in 1851, caused other nations to long to imitate so illustrious an example, by which the people of the Earth were invited to compete in the ways of civilization, to produce the choice objects of their artistic and manufacturing skill, and thereby create a spirit of peaceful emulation, worthy of the progress of the human race at large—by which their happiness might be promoted, and the attempt, at least, made, to join in good fellowship the rival nations of the earth, who, alas! have too often stood face to face with the weapons of destruction in their hands, to fight for the phantom of military glory, or to glut the ambition of some capricious despot, but at the same time to plunge the masses of the people into destitution, misery or death.

The Americans of the United States had at one time contemplated the purchase of the Hyde Park Palace of glass, but luckily a Company was formed in England who bought it, as it stood, for £70,000, and removed it to Sydenham, at a short distance from London, where the wonderful building of Joseph Paxton will continue to form one of the chief attractions of the

VOL. VII. JUNE—DECEMBER, 1853.

neighbourhood of the capital of Old England. The Americans have consequently constructed a Crystal Palace of their own, which was opened in New York, by President Franklin Pearce, on the 14th July, 1853.

In Dublin, also, they have, this year, open a Grand Exhibition which appears to be answering well, but in a humbler sphere.

In laudable imitation, the Dutch Colonial Government of Java thought the opportunity good for promoting an Exhibition of objects of the Natural Produce and of the Industry of Java and the Indian Archipelago; of islands so fertile and abounding in so great a variety of multifarious and curious materials, and it was, at length, resolved to hold an Exhibition in the autumn of the year 1853. For the purpose of carrying out this project, a Commission was formed of some high officers of government, who, associated with a few of the mercantile community of Batavia, composed a Committee for carrying out the plan. The leading men of the Committee, were

Mr S. D. Schiff—Director of Cultures.

„ P. Van Rees—Resident of Batavia.

„ J. Tromp—Ex-Chief Civil Engineer.

Dr Bleeker—Celebrated for his collection and description of fish fauna of the Netherlands India.

These gentlemen were assisted in their labours by numerous other Government officials and private individuals, and by the united efforts of all, a communication was opened with the various Residents on Java, and on the other Islands of the Indian Archipelago, who at the instigation of the Government of Netherlands India, each in the district under his authority, promoted the object in view, by inducing the native chiefs to collect and forward whatever was deemed worthy of notice; some objects being purchased, whilst many others of native *virtu* and antiquity were lent for the purpose of being exposed to gratify the public.

The opening of the Exhibition had been deferred from time to time, so as to admit of having everything arranged as well as circumstances would admit, and to make the collection as complete as possible, before it was exposed to the public view. At length Monday, the 10th October, was fixed upon for the opening, which ceremony was performed by the Governor General of Netherlands India, His Excellency Duymaer Van Twist, attended by a numerous staff of Civilians and Military officers; the whole being enlivened by the grand military band, and the discharge of numerous salvos of artillery.

I propose to note down a selection of the most remarkable articles which came under my notice, after a three days careful inspection of the contents, with the aid of the printed catalogue of the objects exposed. But first, of all, it will be necessary to say a few words regarding the building in which the Exhibi-

tion was made. The building was constructed for the purpose, in the north-east corner of the King's Plain, close to the Citadel of Batavia. It is built of the homely materials of brick and mortar, plastered inside and out, and covered with red tiles. Whether "a vow has been registered in heaven" that it shall not survive the glory of an evanescent exposition, and that as soon as October and November have passed away, and its contents are removed or returned to the lawful owners, it shall be destroyed, must be left to time to determine. The building itself answers its purpose well enough, but would form no permanent object of beauty on the King's Plain; this might be obviated by planting it round, but being within the *rayon* of the Citadel, strategy will, no doubt, counsel its removal, though a few good cannon shot would, at any time, soon level the whole to the ground.

It has no pretensions to elegance or novelty of construction, as was the case with its noble prototype the "Crystal Palace," and its dimensions are of course comparatively humble. In order to form some comparison, we may remind the reader that the edifice in Hyde Park was 403 feet wide, 1848 feet long, and the transept 108 feet high, and entirely constructed of iron and glass.

I paced the outside of the Batavia exhibition and found the extreme length in nearly an east and west direction, 84 paces, which average 37 inches—thus very nearly 260 feet long, by 66 paces or about 200 feet broad from north and south. The building is a parallelogram, with 19 roomy lancet-shaped windows on the south side, and 15 similar ones at each end, on the east and west. In the centre of the northern façade is the entrance, under a projecting portico, with windows in the main building, to the right and left; and a bit of shrubbery and garden has been coaxed into existence in front of the entrance portico, which helped to enliven and diversify the scene. The window openings had bambu gratings painted black, and the aperture was otherwise closed with oil cloth, which admitted the light, at the same time that it intercepted the view from without. Within the enclosure so described, a broad corridor or spacious gallery ran all round the four walls, being spacious and airy, but having a wall also towards the centre of the enclosure, and you thus, on entering, turned to your right or left, and could go all round the exhibition till you returned to the spot, at the door, from which you had set out, examining, as you went, the objects exposed. In the centre of the quadrangle was a large circular Pondoppo or shed, with chairs or seats and tables for visitors to repose at, and a buffet where drinkables, biscuits and sweetmeats might be procured. Between this circular and central Pondoppo and the galleries where the goods on exposition were found, was an open yard, containing a few curiosities of plants, amongst others some cocoanut trees growing in tubs, with the shell, or seed nut, outside the ground,

with which the communication was made merely by fibres.

I will first notice the articles belonging to Java, going over the different Residencies, from Bantan in the west to Bazukie at the opposite, or eastern extremity of the island.

The objects from BANTAM were only very few in number, merely amounting to 26, and none of them of any consequence,—consisting of a few minerals and some of the commonest appurtenances of native house-keeping.

BATAVIA was much more abundant and happy in its productions than Bantam, yet afforded few objects of real curiosity or rarity. It had many objects of its agriculture, as rice, sugar, coffee, spices, &c. &c., some very good specimens of Batavia-made carriages, of book-binding, and of other trades carried on in the capital of Netherlands India. Amongst other things was a collection of 26 models of prows and boats in the Indian Archipelago, sent in by His Excellency Duymaer Van Twist.

Amongst the models, two are worthy of notice, being the invention of Mr C. Deeleman, Civil Engineer at Batavia. The one was a machine to stamp out or husk rice, by means of four wooden stampers, which worked up and down in a wooden trough, and which were raised up and dropped alternately by means of iron hooks or catches attached to a horizontal spindle, which could be worked by one person. The other was called a "LEUNINGSPoor" or bannister-rail, proposed to be put in operation between Batavia and Buitenzorg, a distance of 39 pauls or miles. The bannister-rail consists of a single line, is formed of timber and must stand up some dozen or 15 feet above the ground. The carriage to traverse on this rail, instead of running on wheels on the ground, is balanced upon the rail, on wheels which work upon the top of the rail, and the body of the carriage depends on either side, and is prevented from collapsing by friction-rollers which work upon parallel plates attached to the uprights, a few feet from the ground. The wheels which work upon the top of the rail are attached to axles, which are found in the upper part of the vehicle. A roomy box or carriage thus depends upon each side of the rail, which is entered by fold-down flaps or doors at the end. In these boxes it is proposed to stow passengers, cattle, goods &c. Buitenzorg lies between 800 and 900 feet above the sea at Batavia, as variously determined by the naturalists, who have at different times lived in Java. The most rapid descent is from Buitenzorg to the first post at Chiluwur, a distance of 6 pauls. The descent during the next post, at Chibinong, which is still $27\frac{1}{2}$ pauls from Batavia, is less rapid, and the height above Batavia has now diminished by about one-half and come down to 464 feet. Of course it would be necessary to construct the bannister-rail so that it should always have an even and uni-

form descent, so that the possis of which it is constructed would sometimes have to be long, and much elevated, or else placed on embankments made for the purpose. The greater part of the goods to be transported, would be from Buitenzorg to Batavia, and consisting chiefly of rice, coffee and other agricultural produce. This would thus be *down* an inclined plain, and the machine would almost run of itself, or with the assistance of perhaps a few horses. The return loads would always be of less consequence, both as to bulk and value, consisting of all kinds of Europe goods for consumption in the interior; this would be so far lucky, as it would be necessary to use horses or buffaloes to drag back the carriage up an inclined plane of upwards of 800 feet. The plan, though looking plausible in a small room-model, will, however, no doubt be subject to much inconvenience and expense in working. It would have to be constructed of *Teak* timber, and capped with an *iron rail* on the top. *Teak* is hardly grown at the west end of Java, and would thus have to come out of the government forests at the other extremity of the island, where it is by no means over-abundant now-a-days, and it is no small quantity of timber that would be required to construct such a rail for 39 miles, which would of course be subject to much wear and tear from being exposed to a tropical climate, where the alternations of rain and sun could not fail soon to show their influence. Then to secure the footings of the rail, so as to have them firm and immoveable in the earth, would be no slight expense and toil, and probably as much or more timber would have to be buried in the ground in buttresses of masonry, as would project for the purposes of the rail above. I much suspect that the "bannister-rail" will die a premature but natural death. If government ever sanction the outlay of so much capital, they had better keep in the beaten track, and adhere to methods that have been proved to answer well.

Under Batavia, was also exhibited the very interesting collection of fish and other sea animals, along with some other rarities, belonging to Dr Bleeker, all preserved in spirits, in large glass jars or bottles. The most remarkable among these were:

The "Spookdier van Menado" or the Ghost Animal of Menado—which is adapted for climbing in trees, being provided with sharp-nailed toes on its four legs. The animal is about eight inches high, covered with greyish hair, has large flabby ears, piercing eyes, and a long thin tail on which the hair stands out at right angles.

A *White Musk Deer* from Banka, of the size of a kitten, white all over, and apparently full grown.

Solegnathus Blockii—Bleeker—the Sea-needle of Block, a long spindle-shaped fish, with round needle-shaped body.

Hippocampus Kuda—Bleeker—A sea fish, with a head like

that of a horse, which the word *Kuda* in Malay implies. The body is tapering and curled near tail.

Syngnathus Brachyurus—Bleeker—A short-tailed sea-needle.

Pegasus Natans—L. Three inches long—a small fish with two largish fins near the head.

Pegasus Draconis—L. Three inches long, dark coloured, with two very large fins near the head. These fins open out like fans, being a transparent film stretched out on eight thin toes or fingers.

Many curious fish and crabs are also found in this collection, and will be deemed well worthy of the notice of those interested in these matters.

BUITENZORG. The objects supplied by this district were also of trifling importance, comprising models of native houses and buildings, as well as various implements in daily use among the people. From Mr J. E. Teysman, the Hortulanus of the Garden of the Palace at Buitenzorg, was an interesting collection of 160 different sorts of woods found in the Sunda districts—a muster of vanilla grown in the garden at Buitenzorg—and a Patma flower (*Rafflesia*) procured on Nusa Kambangan. From Count J. H. Van den Bosch were exhibited musters of cochenille, tea, nutmegs and mace, as well as of vanilla, all the produce of his estate Pondok Gedé. Mr Weber, who won a medal at the London Exhibition for native flax, has also present, here, some musters of the same material prepared by him.

The only contribution from Jasinga were four native grave-stones, cut from a dark coloured kind of sand-stone, known by the name of *Batu Haruyang*, and found only near the village of Munchang on that estate. These grave-stones are in great request all over the Buitenzorg district, for marking the spots where departed relatives lie.

KRAWANG produced a good collection of stuffed animals, birds, snakes, insects, &c., sent in by Mr E. J. E Van der Parra Breton Vincent, and which were arranged on the right and left of the entrance to the Exhibition, and formed thus the first objects which attracted the attention of visitors. The same gentleman had also sent from the estates of the Messrs Hofland, from Pamanukan and Chassem, musters of rice, sugar, coffee, tea, tobacco, arrow-root, jagory, sugar made from the Aren palm, and four varieties of oil made from Cocoa-nuts, (*Cocos nucifera*)—Kachang Tanah, (*Arachys hypogea*)—Wijen, (*Sesamum Indicum*)—and Kamiri (*Aleurites Moluccana*). The contributions of Mr Vincent were the only ones from Krawang, with the single exception of four musters of cinnamon, two musters of cinnamon oil, and four earthen sugar-pots, apparently sent in by some one else.

THE PREANGGER REGENCIES had a large variety of articles, consisting mostly of things in daily use with the natives, as of

clothing or household furniture in some shape—or the common productions of the forests, or of the cultivated land, which, however, call for no particularization. Chianjur, however, sent one precious morcean in the shape of a “Golden Brides-Crown,” which was very handsome, and said to be valued at 1,200 florins. It was a sort of head-dress or helmet made of filagree gold work. Chianjur also contributed some Sunda musical instruments, viz. a *Rebab* or fiddle, a *Kachapi* and *Trawangsa*, varieties of flat harps played with the hand, and *Bandang* completed the lot with a set of *Anghlungs*, or bambus cut off like organ pipes, and set in frames, which, being shaken by the hand, can be played in large companies, consisting of many performers. There was also the more homely *Chalung*, which are small bambu tubes, strung together, like the steps of a ladder, and tapped with a little mallet.

From Chianjur was also a yoke make of spotted bambu, and tipped with bits of polished tin: this instrument is used for carrying home the paddy from the fields, with certain ceremonies, when some vow has been made. *Bandung* also sent a round table, the slab of which was composed of 120 different varieties of wood, let in and joined together in a pattern.

From Garut was a muster of paper made from the bark of the *Saeh* tree.

CHERIBON had also its contribution, mostly of rude articles in daily use with the natives. More remarkable and scarce, was a specimen of wax made from the wild plantain tree. Rather a pretty object was a wooden screen, to stand opposite a door-way, being carved out of wood—8 or 10 feet square, and representing a *Rasaksha* or demon, such as ancient Javanese history speaks of, with a crocodile's head, and armed with *Kris* and *Chakradipraja*, a sort of spear with spur-like head. This screen was handsomely gilt and painted green, red and black, and would be considered a great ornament to a native chief's door-way. In this part of the collection were also a bow and arrows, which are very rare articles with the natives of Java.

TAGAL had a better display than Cheribon, yet presented few articles which were worthy of note. There was one collection of 140 different kinds of wood, from the Regency of Brebes, and another of 82 sorts from the Regency of Pamalang, besides sundry musters of barks, roots, leaves, and fruits, for which the Javanese have some particular use. Here also was another muster of wax produced from the wild plantain and called “*Malam Kollé*.” By way of a rarity was a *white Lélé* fish, which is otherwise always of a dark black colour. It is a fish that lives in stagnant pools or lakes. There were also here a tea-kettle stand, cast in brass, by the Javanese Wasman, under the directions of Mr F. A. Bergmans.

A brass Archimedes screw also cast by Wasman as above.

A small Steam Engine by the same parties.

Two cast-iron plates, which are so nicely polished that on a trifle of oil being applied to them, and the two plates then brought in close contact, they remain firmly adhering to each other, and can then support a weight of 600 Amsterdam lbs., without parting.

Model of a house-door so fixed to the posts by artificial hinges, that it can open and shut on either side.

Model of a suspension bridge—this model can support a weight of 700 Ams. lbs. These latter articles also prepared by the Javanese Wasman, under the directions of Mr Bergmans.

A hank of thread made from the *Widuri* plant (*Calotropis Gigantea*.) This plant is herbaceous and only two or three feet high, and produces a pod with silky fibres, and is common almost all over Java.

A bit of cloth made from *Widuri* thread.

A bit of cloth made from the fibres of the Pine-apple leaf.

A bit of *Karung Wulu* or Wulu bagging made of shreds of finely cut Bambu Wulu.

A bit of *Karung Bamba*, also called "*Kain Pellah*," woven from strips of Bambu Tali or Bambu Wulu.

PAKALONGAN certainly made the worst show of any Residency of Java, in the whole Exhibition. The catalogue only goes as far as No. 10, in the enumeration of articles, and of these, two were antiquities found in the Residency of Bagalen. This is below all "critique."

SAMARANG, considering that it ranks as the *second town* in Java, and thus takes precedence immediately after Batavia, and that it is well known for the manufacturing skill of the native population, was very miserably represented, having only 41 numbers in its catalogue. Here were seen:

A muster of salt Mud, thrown up by the wells of Karadenan.

" of salt water from the warm springs of Mendikel.

" of Salt obtained from the Salt springs and mud wells of Grobogan. These three specimens were each in a glass-bottle with glass stopper, and are from the celebrated mud wells of Grobogan, which are always in a state of semi-volcanic ebullition.

There were also musters of Calcareous spar found in Grobogan, and of Petroleum or Earth-oil found at Purwodadi, both from the same neighbourhood. In the exhibition, there are numerous musters of this Earth-oil, which is found in almost every Residency of Java, more or less, oozing into wells dug in certain spots in the ground, for it to drain into. There were musters of P  p   hemp, Widuri flax, and yarns made of the fibres of the Pandan tree. The musters of leather-ware, for which Samarang is famous,

were carriage and buggy harness, gentlemen's and lady's saddles, shoes and boots, and a few other trifles completed the list.

KADU. The collection sent by this Residency contains little worthy of notice, and has only 34 numbers. An elegant sabre or scymeter, kris, Javanese saddle, and Europe-shaped saddle, all made at Magelang, were worthy of notice for their workmanship. There were also models of an American Suspension Bridge entirely made of bambu, besides models of Javanese bridges, both suspension and floating, made entirely of bambu, which were worthy of inspection, as exemplifying the ingenuity of the Javanese, when they choose to exert themselves. The collection also contained a portrait of the present Regent of Kadu, Raden Adhipati Ario Dhanu Ning Rat, one of the most enlightened chiefs of Java; this portrait was executed by Raden Saleh, a Javanese artist, who has been trained in Holland.

BANYUMAS had a more numerous collection than Kadu, but contained little that was peculiar to itself and thus rare, as not being found elsewhere, and many of the objects were noted as sent in by the Honourable Mr J. F. H. Gevers, who is merely a visiter to Java, and has, I believe, no particular connexion with Banyumas. There were several specimens of minerals, and three collections of musters of woods, one of which was the property of Mr Gevers, containing 201 distinct varieties from Nusa Kambangan, 68 were in another lot, collected in the district of Purbolingo, and a case contained another lot of 134 kinds. Two sticks of bambu, each 8 or 10 feet long, were exhibited, which were also the property of Mr Gevers. They came from Dayu Luhur in the district of Chilachap. They were of that species of bambu called *Bitung*. I measured the larger one of the two, and found its circumference, near the root, to be 25 inches English, whilst at 6 or 7 feet higher up, the girth was 22½ inches. The wood of this bambu is thick and heavy.

There were several examples of the celebrated Patma or Raflesia flower in the Exhibition, but none of them large. Two samples were exhibited among the goods from Banyumas, but these did not exceed in size a man's fist. The flowers were not yet expanded. There was here also a muster of flax made from the fibres of the wild plantain tree, and also some wax procured from the leaves of the same plant. Banyumas also sent a variety of native copper-ware for household purposes, and many other small articles of daily use, but none of them curious.

BAGALEN had also its contribution, but I could find nothing rare among the articles worth commemorating. This collection was rich in musters of native manufactured cloths, partly woven in the pattern, and partly *batikked* on European cloth. From the district of Ambal were some models in miniature of Angklungs and Gamelans, and also the leather figures of the Wayangs,

which are reflected by candle-light upon a screen, whilst a Javanese bard sings the ancient story of the land.

JUGJUKARTO had 44 various specimens of minerals from the Regency of Nanggulan, sent in by Mr J. J. Hasselman, Resident at the Court of the Sultan. This gentleman had also contributed some specimens of fossil wood, and four small metal Hindu images. His Highness the Sultan of Jugjukarto had sent two books with drawings, which were to serve as title-pages of books, or superstructures for state letters—these were elegantly and tastefully got up, with figures and flowers in gold leaf. From the Sultan were also exhibited representations in polished and in frosted brass, of the State Regalia, which are of gold, and of course too precious to be sent from home. These brass representations are well done, and represent a pyramid 20 inches high—a dragon—a deer—a common dock—a peacock—and a goose. There were also numerous other articles in brass, representing a variety of household utensils in use at Jugjukarto, as sundry cooking implements, water goglets and bowls, waiters, kettles, inkstands, siri boxes &c. Also a great variety of cloths, either woven or batikked at Jugju. Pangeran Adhipati Paku Alam, the independent Prince at Jugjukarto, had sent 10 curious state spears, which were very well worthy of careful examination, viz.

Wahos Liman Balebang—Wahos means spear—Liman is the name of an Elephant which is confined in a stall or cage—Balebang is the name of one of the sorts of krisses. This spear has its blade issuing from an Elephant's mouth.

„ *Tri Sulo*—Having three prongs, as the name purports, like Neptune's trident. The prongs are short.

„ *Sapit Habon*—perhaps ought to be Sapit Habon=satisfied with fighting.

„ *Sangkut Panggiyan*=caught or entangled in the encounter. This spear has a kink or catch near the hilt.

„ *Sigar Jantung*—a split heart.

„ *Kukila Tajem*=the sharp crane. This has a spear projecting from a crane's bill.

„ *Chokro Sulam*—The embroidered Chakra or discus. Has five short spears projecting from a discus or circle of iron.

„ *Bedami*—the Peacemaker. Three pronged, with outer prongs bent round and inwards at top, but sharpened on outer edge so as to cut.

„ *Kerrang Ngerrang* implies fierce and quarrelsome. This has a spear projecting from a crocodile's mouth.

„ *Bargo Astro*—with flat, very broad head. Bargo is a peacock's tail—Astro, a weapon in general, and thus implies the peacock's tail weapon.

SURAKARTA or SOLO, had a much more numerous and better collection than that of Jugjukarto, and evidently more trouble had been taken to give effect. The following are some of the more notable objects:

12 musters of different sorts of bambu.

A bundle of the wing-feathers of the Bidu, a sort of hawk; these are black and white, and are used for the feathers of arrows, now-a-days only used as a curiosity.

Burnished ornaments of brass, to look like gold, used by the dancing girls—Bidoyo—of the Emperor of Solo.

A Javanese head dress of silk and felt, black, with white plume.

A set of articles belong to the state show of a Tumunggung, as—

3 Spears called "Pangawinan"—long, good, common articles.

1 Gun or fowling piece.

1 Rattan mat.

1 Payung Bawat, an umbrella which is not made to shut up, but must always remain open. The "Bawat" or handle of this Payung ought to be of a certain length, for measuring the paddy fields, and as such forms part of the paraphernalia of a Tumunggung.

1 Kendogo, or clothes' box.

1 Tube for scented segars.

1 Split bit of wood for holding a handkerchief.

1 Walking stick—1 Pipe—1 Siri Box—1 Hat Box.

2 Brass salvers—1 Spittoon.

1 Wédung Knife, which is an indispensable article of full court dress.

There was also a money chest, invented and made by Pangeran Sonto Kesumo, which was evidently a curious puzzle to open.

26 small wooden images, representing Javanese in Court dress, from a Pangeran down to one of their soldiers, and ending with a High Priest and his Assistant Kérib and Mudin.

A large and complete Gamelan set of native musical instruments, mostly of gong metal and brass.

A set of Angklung instruments of bambu, of the kind called Saléndro.

A very large collection of Wayang figures, cut out of hide, in old and fantastic form, painted and gilded. These were of the kind known as *Purwo* or ancient, and with them are given representations from the history of the *Pandowo* or five sons of Pandu Déwo Noto.

As an accompaniment to the above, was a set of 59 Topéngs or masks, cut out of wood, painted and gilded, and often representing hideous and monstrous human faces. With these are given representations from the history of the Princes of Kediri.

Here were also found the following 12 Payungs or Umbrellas of State, as carried after the separate ranks of native chiefs and

from which consequently each man's rank is immediately perceived as he passes along.

1. of the Crown Prince, which is also worn by the Emperor or Susuhunan, and everywhere in Java by the European residents, or chief civil authority. It is entirely of *gold*, or rather *gold-leaf*.
2. of the legitimate sons of the Emperor all yellow—with, however, only a border in *gold-leaf*, the rest being merely painted *yellow*.
3. The oldest illegitimate son of the Emperor, who bears the rank of Pangeran. This has a sky-blue ground with gold border and centre or tip.
4. of the younger illegitimate sons of the Emperor, of the rank of Pangeran. This is of a dirty white ground, with the gold border and centre or top—and yellow within.
5. of Pangerans—a yellow Payung with gold border. Near the centre it is white, but terminates with a gold top or tip.
6. of the Aryas, or grand-children of the Emperor. Sky-blue, with gold border.
7. of the Raden Adhipati, or Prime Minister. Green with gold border, and *broad* gold tip.
8. of the Tumunggung—green, with gold border and tip.
9. of the Kaliwons—entirely green.
10. of the Panēwus—light blue, all of one colour.
11. of the Mantris—all black with gold top or tip.
12. of the Dēmangs, all red, with gold top or tip.

There was also another state Umbrella, which does not belong to the usual models, and which has been given by the present Emperor, to his Uncle the Pangeran Adi Negoro. It is of a bright yellow ground, with border and centre of gold; resembles No. 3 except in the colour of the middle part of it.

There was another Payung which formed a rather formidable weapon; it was rather square, and at each of the four corners had a sharp spear projecting and radiating from the top, and on which the sheltering part of the umbrella was stretched; the point or top was also provided with a spear.

There were also bows and various arrows, which are kept about the native courts as curiosities, but in these days of guns, powder and ball, the Javanese know better than to trust to their old weapons.

Another lot was a Blow-pipe for clay pellets, or small arrows, to shoot birds or fish.

Now follow 20 specimens of Kris heads of various descriptions; but as no numbers were attached to each article, it was impossible to know which was which—they are given in the catalogue as—

1. Tunggaksemi, for Widonos and Kaliwons.
2. Tunggaksemi Kabienchih, for Panewus and Mantris.

3. Sambegan Rambutan, for Jajar Keparak.
4. Sambegan, for Jajar Karyo.
5. Sengguwan, for Panekels, and Panelawas.
6. Sambegan Minyak, for Jajar Nyogo.
7. Potrokiloso, for the subjects of Gajah Mati.
8. Dagellan, for mis-shaped Court servants.
9. Samban Gedag, for the chief Panakawans, or attendants.
10. Samban Purwo, for the Servants.
11. Chalan, for the Children of Panewus and Mantris.
12. Buchan, for Hump-backs.
13. Cheballan for Dwarfs.
14. Tunggaksemi—of Horn.
15. Sambegan—of Horn.
16. Chalan—of Horn.
17. Tunggaksemi—of Gold.
18. Sambegan—of Silver.
19. Tunggaksemi—of Silver.
20. Sambegan—of Wood.

A curious instrument of native luxury was seen which bears the name of a *Dukun* of Tamarind wood. A *Dukun* is a native quack Doctor, or rather Doctress, as the faculty here consists, as is often the case in other parts of the world, of "*old wives*." The "*old wife*" of Tamarind is a crooked bit of polished wood, with a tantalizingly crooked end, with which to get at any part of the body and have a "*scratch*" to the Highlander's tune of "God bless the Duke of Argyle."

A handsomely gilt and otherwise ornamented saddle, with a flap on each side like a dragon, is used in native tournaments called "*Seninan*"—to this saddle belongs a bridle and other gay gilt horse trappings, as well as a long wooden tilting pole, with which the Javanese try to unsaddle each other, or vex their adversary's horse.

Several articles of leather manufacture were present from Solo, as carriage harness, lady's and gentleman's saddles, shoes, &c., this place being celebrated for its articles of leather, in which it competes with, and sometimes excels Samarang.

There was a model of a prow in use on the Solo river for fetching salt from Grissie, and of a boat or *Tembo* cut out of one log of wood.

A model of a car or waggon is called *Grebang*. The original of this *Grebang* lies half rotten, in one of the rooms in the *Kraton* at Solo. Tradition says that in the days of Majapahit, and also later, it served as a hunting car for the Royal family. It is a large, oblong, wooden platform on 4 wheels, with covered room, drawn by 4 pair of buffaloes, attached by the usual Javanese yoke to a chain and so dragged.

There are some neat and pretty models of Palanquins, as used

in the native provinces, very handsomely and neatly got up with curtains and other conveniences: one is called *Joti* for princesses and daughters of Pangerans—another is *Tandu lawak* for the wives or daughters of Tumunggungs—a third is *Tandu Gandul* used for the wives of Mantris, and also for brides, when these are the daughters of Mantris, or of respectable Javanese. A fourth are models of a pair of *Kremolhé*. These palanquins are of Chinese origin, and are generally made use of by Chinese women. There are here also many samples of native Batik cloths of various descriptions; the handsomest of these, is a long piece of cloth called a *Dodot*, belonging to the Emperor's state dress.

There is, furthermore, a collection of 20 various patterns traced on paper, to *batik* by. These are very pretty, and would be worth sending to the manufacturers in Europe to imitate and work by. In the process of *batikking*, the pattern is first traced on cloth with hot, and thus liquid, wax. The cloth is then immersed in the dye-tub, and of course the dye does not take where the wax is, which is removed after the cloth is otherwise dyed. The Batik apparatus is also to be seen in the Exhibition.

From the foregoing account it will be perceived that the collection of articles sent by Solo contained much of real interest, and did great credit to the parties who had interested themselves in forming the assortment.

The contribution of *PACHITAN* was not of any great importance, but being only a small district, it could not be expected to produce many rarities. There were several specimens of Minerals and some pieces of fossilized wood and sea-plants found at *Pring-kuku*. 55 specimens of different kinds of wood were only poor affairs, being thin and badly got up. There were, however, in this collection two articles which, by the natives at least, would be highly prized. The one was a *Mustika Kerbo*, and the other *Mustika Waringin*. The word *Mustika* means Amulet, which is always some very scarce or supernatural production, and which being worn about the person, acts as a talisman, and wards off evil. The *Mustika Kerbo* or Buffalo Amulet was quite white, and round like marble, nearly an inch in diameter, and semi-transparent; it was stated to be found at *Panggul*. The *Mustika Waringin* was said to be a calcareous concretion, found at *Ngadi Rejo*. It is quite black and a little smaller than the *Mustika Kerbo*. *Waringin* is the name of a tree, the *Ficus Benjamina*, which always adorns the open plain in front of the houses of Javanese chiefs. I could not, at first, find these two *Mustikas*, till I got the assistance of one of the persons on duty in the Exhibition; they were carefully put away in a little case, out of sight, for fear of some one walking off with such small objects, but in the eyes of all natives of so much value and consequence.

MADIUN had evidently made an effort, and had sent many

interesting articles. The first articles on the catalogue were specimens of minerals from the mountains of Arjowinonggen in Ponorogo, and whetstones from the mountains of Sumorotto, and among these last was a large square polished white limestone from the hill of Chombri, and another limestone flat flooring-stone from Kali Kunchi. The Baron Sloet Van Oldruitenborgh, sugar fabricant in Madiun, had sent some trachyte furnace mouth-pieces, which were well cut out, but rather small for actual use. There must also always be the fear that these trachyte stones would fly with the heat of the furnaces. There were 31 specimens of woods, each numbered, but as the catalogue does not place the said number opposite each name of specimen, which it nevertheless gives, it was impossible to identify them. The same defect attached to musters of different dye stuffs, roots, and leaves for medicinal purposes. By this oversight, a great deal of the interest of this collection was lost. There were also specimens of different kinds of paddy, of cinnamon, coffee, tobacco, and indigo. There was also a "*Kalapa Puyru*" or Quail Cocoonut, full grown and curious. The outer husk had been removed, exposing the polished shell, which was 4 inches long, by $1\frac{1}{2}$ inch thick, through the middle. One end was terminated by a sharp point, and the opposite extremity presented three small holes or eyelets, whence the germination would take place. There were also—a specimen of rosin collected from *Sapanwood*, and which is used as a paint—3 musters of oils, of *Jarak*, *Wijen* and *Kesambi*, and of 5 different sorts of what were called varieties of flax, as of *Kapas* or cotton—*Pulutan*—*Rameh*—*Lulub Wawe* and *Kadebak*, all twisted into bits of rope. *Kapas* is common cotton, and *Rameh* is the nearest approach to a flax. Some handsome golden beetles, a kind of large Spanish flies, were in a bottle.

Two wooden images of the size of life, clothed in all their native finery, represent a Raden Bagus, and a Raden Ayu, a native gentleman and lady of rank. These two figures are very well got up and very natural. The rules of the Exhibition forbid visitors to touch anything. The figure of the Raden Bagus, however, holds in his hand, a sheet of foolscap neatly folded, which he seems to invite you to inspect. Thinking that the paper might give some account of the figures, I had, like many others, a tickling to be acquainted with its contents, and looking carefully round, to be sure that no *Cerberus* was ready to interfere, took the paper, and on opening it found, to my chagrin, the grinning head of a man traced, with his thumb-end applied to the extremity of a rather prominent proboscis, and reference written, as spoken from his mouth, to Article 9 of the Regulations of Order, which, after thumbing over the catalogue, is found to be—"it is forbidden to touch any of the Articles exhibited",—an innocent way of

punishing the inquisitiveness of those, who, like myself, cannot comply with arbitrary but very necessary regulations.

There are also five wooden Wayang figures, some gilt and very prettily got up. The figures represent what the leather Wayang images only give in outline and profile. This kind of Wayang figure was in use at the time that Majapahit flourished.

Several specimens of native agricultural implements and household goods and tools contributed to swell out this collection, along with cloths both woven and batikked in Madiun, the various implements for which purposes were present.—Sundry walking sticks of various kinds were seen, sent by Ponorogo. And there were four fans of *Akar Lorowestu*, a fragrant grass, which is I believe the *Kusa* grass of India, and of which tats or screens in front of doorways are made, and which, when in the heat of the day, they are sprinkled with water, impart a fragrance to the rooms they protect. It is stated that on a certain occasion a Brahmin gave a handful of this grass to Buddha, who cast it on the ground, under a *Bo* tree, when it immediately became a seat for him to repose on,—hence it is a sacred grass amongst the Buddhists (see Clough's *Singhalese Dictionary*, page 184). These fans of *Lorowestu* are semi-circular and made so as to always remain open, and do not thus fold up. From *Pasuruan* there were also in the Exhibition, other fans of *Lorowestu* roots, which had a sweet scent. They are of a light brown colour. Madiun had other fans, viz. of Peacock's feathers, and also made of the feathers of other birds.

Interesting articles from Madiun were Javanese paper, and the apparatus for preparing it. This paper is prepared from the bark of the "*Gluu*" tree—said to be the "*Morus papyrifera*," by a process of maceration and beating, for which purpose the implements are also here exhibited. These consist of a stout, thick, wooden form or block, with an iron mallet grooved on one side, to beat the bark with. This grooved mallet is a bit of iron, half a foot long, and an inch square, with a hole at one end of it, in which are inserted *two* slips of bambu, by way of a pliant handle, and with which instrument the soft bark could be easily beat and teased till it obtained the required consistency. A large brass mallet, and one made of deer's horn, and scored on the face, very probably belong to the same paper apparatus, as they lie close by. These implements are interesting as being models of a manufacture similar to what prevailed in the South Seas, when first explored by Cook. The bark cloth there prepared was not for writing on, as the natives knew not that art, but for making articles of dress, and it shows that the art had no doubt been brought by the natives, when they emigrated, at some unknown period, from the Asiatic Archipelago. The wild tribes in some parts of Celebes, still to this day, prepare bark in the same way for articles of dress.

Specimens of the paper so prepared from the Glugu bark in Madiun, are exhibited, both loose in the piece, which might be made up into dresses, as well as put up in blank books in leathern binding. This paper is made under the superintendence of Priests at Ponorogo in Madiun, where there is a great school for the education of Javanese in writing, and in the Mahomedan religion.

Two brooms were exhibited, also from Madiun, and said to be made of "Arjuno grass"—which was a grass, or some fibrous vegetable substance, of a brown colour, resembling the Lorowestu root abovementioned. This Arjuno grass was also slightly scented. The grass was about a foot long, and set in wooden handles, like Japan brooms. The wooden handles were also about a foot long, painted black and red, and ornamented at intervals with gold leaf gilding. They are rather pretty objects, as well as curious. Both this Arjuno grass and the Lorowestu are no doubt relics of the ancient Hindu Colonists on Java, one of whose seats was indubitably in *Madiun*, which implies in Sanscrit—*Middle Java*.

The last article which we will mention as belonging to Madiun, is a "tea-service" made at Magettan of pipe-clay. They look prettily done, and are of a light brown colour, but of course no great works of art.

It will be perceived that Madiun has afforded many articles of much interest, and being an *inland* Residency, and thus secluded from more immediate communication from without, may be considered as more especially characteristic of native Javanese industry.

KEDIRI, another inland Residency and adjoining Madiun, comes next, but does not afford the same interest, the objects being fewer, and less care taken to let people know what they are looking at. In a glass bottle were some greyish lumps of clay, known by the name of "*Tanah Ampo*," and said to be eatable, but no further particulars could be gleaned regarding this article.

Luckily, however, the following extract from the Java Bode of the 19th October, 1853, No. 83, will tend to elucidate this *Ampo* stuff.

"Not alone animals, but also plants contribute towards the formation of our globe. I need only call to mind the matter of turf, which covers so great a portion of Europe, and which is nothing than the remains of innumerable small plants, the half decayed fibres of which sink down in water, and form the foundation of new series of plants. I need only refer to the inexhaustible strata of Coal, which also are merely the result of a formation of turf, which is many thousand years old. But few know the works of the smallest organic beings, regarding the vegetable or animal structure of which naturalists have not been able to agree, viz. of the Bacillaræ or Diatomæ. Alone the Microscope

discloses them to our eyes; and alone a magnifying power of 300 times the original size, shows us so clearly their multifarious forms, that we have the opportunity of examining these animalculæ with exactness. They live in the sea, and in rivers, in the Polar regions and in the tropics, as well as in the hot springs of Carlsbad.

"What we look upon as stone or earth, is often nothing else than the work of these plants. The ground of Berlin consists of layers of remains of animalculæ, which are sometimes 5, and then again 100 feet thick, and the heath of Luneburg bears a deposit of 10 to 40 feet of these mites, part of which are still in life, and appear to be continuing the building of former times. They form the powder which is used in instrument sharpening, the tripoli, and pumice stone; even the eatable earth, which is found in so many countries, and which occurs in Java, amongst the mountains, under the name of *Ampo*, at a height of 4,000 feet, consists almost exclusively of such organic remains. Associated with foraminiferæ, they form great masses of chalk-marls, of rocks of many hundred feet in height, and the hard knobs of flints, which are found in chalk, are constructed therefrom and from the remains of sponges. Volcanoes discharge, into the air, through their craters these animalculæ, which have long been buried in the bosom of the earth. Sometimes they come forth as hard rock, melted together, sometimes as dust which makes it impossible for the sun to shoot forth his rays over immense extents of country, where it is far and wide distributed. So mighty are these architects, though such little beings.

"41,000 millions of individuals find room enough in one cubic inch—70 billions in one cubic foot. But they propagate themselves with such unheard of celerity, that one single individual can multiply itself in 24 hours to 16 millions, that one animalculæ of this kind has brought into existence in two days, a quantity which measured one cubic foot. Such incredible quantities of these animalculæ exist in the mud of Wismar, that they are estimated to form, in one century, a layer of the thickness of one foot, and of the superficial extent of 40,000 square feet. What are the buildings of man, in comparison with the works of these apparently insignificant beings, which have eluded the sight of man during so many ages?"

This *Ampo* is also found in the Residency of Cheribon, as shown from the following extract of Kussendragers's Java, 1841, page 131—"In the environs of Kampong Pakendien, is dug up a sort of red earth, which the natives call *Ampoh*, and carry in baskets to Tagal, for the purpose of being eaten, and sometimes also to be used in smoking."

Ampo, and in the verbal form *Ngampo*, means in the Sunda language to lick the ground, as done by different animals, such

as buffaloes, deer, and wild pigs—where some natural or peculiar properties exist, and which are mostly only discoverable by animals. This takes place in many spots, and is similar to what occurs in North America, where the places are called “Salt licks.”

An eatable clay is also said to be found in South America, on which some of the rude tribes on the banks of the Orinoco or of the Marañon are said to subsist, and may perhaps resemble the Ambo of Java.

Among the articles from the West Coast of Sumatra was also a muster of “Eatable Earth,” which was of a white colour and soft. It was said to come from Priaman.

KEDIRI has also a collection of 26 different kinds of woods, but these are only poor things, and in too small bits to afford proper specimens. Eleven different sorts of bambu had to be grubbed out from under a table, where they had been thrown, as if they had been ashamed to give them a more conspicuous place. The catalogue gives the eleven names they are known by, but there was no means of identifying them separately, and as some of the names are not current elsewhere, this was a pity. The same remark applies to 6 different species of rattans, and also to 14 varieties of materials of which rope and twine are prepared, which were scattered about in confusion without any means of identifying the different articles. A rather curious lump of bark-looking stuff, or rather like a series of slices of bark glued together like a pyramid, is called in the catalogue “Jamur Dipo” or a toadstool having medicinal properties.

In a bottle was a muster of the flower of *Kasumba* or saffron, shred fine, and used for a red dye. Another bottle contained musters of so called Spanish flies—*Semberilen*—they were each 1½ inch long, and were brilliant beetles of a mixed bright blue and brown colour. Amongst the models of black-smith’s tools were two good specimens of the Javanese *Puputan* or native bellows, which are two wooden cylinders, with pistons and rods working up and down in them, and which being in turns, but rapid succession, worked up and down by the hand, keep up a good blast to a fire, through a common pipe near the floor.

From the district of Ngrowo in KEDIRI were 8 pieces of limestone, cut like bricks, showing to what purposes the soft limestone may be adapted. Ngrowo had also presented 174 different specimens of wood, which were, however, thrown away for want of means of distinguishing each. The same remarks applies to “some musters of seeds and fruits of various plants”—which is mightily concise and interesting! and the perplexed visiter is at liberty to guess all the rest, as no further particulars are vouchsafed either in the catalogue, or on the articles themselves.

JAPARA made a miserable show, and had hardly any article worth taking notice of.

REMBANG came next and again retrieved the honour of the productions of Java, and showed that more care had been used in forming the collection. Rembang has always been known as abounding in the finest *Teak forests* of Java, and here ship-building has been carried on ever since Europeans have had much influence in Java, the teak timber having been handy here, though now difficult to get, at least in accessible positions. There were exhibited by the Regent of Rembang, Raden Tumungung Corio Chondro Adi Ning Rat, seven very good specimens of *teak*, in large well prepared slabs, each nearly a foot square, and each properly marked with its name:

- Jati Kembang—Jati is the name of the Teak on Java. Jati Kembang thus means "flower Teak," as "Kembang" in Java means flower, to denote its superiority; or perhaps this variety ~~has~~ flowers more frequently than the others. It was a close-grained, good wood.
- " Kapur=Lime Teak, of light colour, and open grain; it has often nodules of lime naturally mixed in the fibre.
 - " Minyak=Oil Teak, close grained, oily looking wood, as the name implies.
 - " Doreng—of large flaky grain.
 - " Sunggu=the True Teak—good, close, smooth grained wood.
 - " Betul=the Right Teak—close-grained, good wood.
 - " Duri=the Thorny Teak. This specimen had some of the bark still left on, to show where the thorns grow out, but the thorns had ill-advisedly been cut off. The wood looked open and porous.

A bottle contained some *Gregis* roots, which are made into a tea, and also some *Sadagori laki-laki*, both being used as a medicine for fever.

Rembang being the Residency in Java where most tobacco is planted, and where this cultivation has succeeded best, of course had plenty of tobacco musters present. These were in the leaf, cured as ready to send to Europe. The fabricants who had sent musters, were D. Vreede of Singahan, from the Fabriek "Nicot," which is one of the best marks—K. Veenstra of Gendrie—Senn Van Basel of Pamottan—De Voogt of Sadang—and De Mol Van Otterloo of Widang. There were also musters of segars made at Tuban, which is close upon the tobacco districts and a muster of tobacco oil was sent by Mr Senn Van Basel from Pamottan, who had also present the model of a tobacco curing house.

From Tuban, Mr W. J. T. Dudman had sent three bottles containing musters of sugar, made at his mill, with the "Centrifugal Machine," introduced lately by Mr Macpherson. Of the Centrifugal Machine, there was also a drawing and description, and a model made by Chaulan and Puche in Batavia, with some

alterations introduced by them. Mr Dudman had also sent a walking stick, from which a dagger could be projected, by manœuvering with a spring. The Regent of Tuban, Raden Tumenggung Chitro Negoro, had sent a specimen of a flower-pot, and of a drip-stone cut from the soft white limestone that abounds in this part of the country. The same chief had sent a handsome wavy Kris called "*Dapur Singhelat*"—another Kris called "*Chundrik*," and a Spear called "*Dapur hudup Chepoko*."

The Raden Ayu, wife of the Regent of Rembang, had sent many articles as specimens of *Batik* work, being the Javanese method of tracing patterns on cloth.

SOURABAYA had sent a pretty fair collection. Being the most important town at the east end of Java, the seat of the Government naval establishment, and a place of considerable trade, the natives find a sale for numerous nick-nacks, which they manufacture very prettily, and of which good specimens were exhibited. We will go over the most notable objects, as they occur in the catalogue.

The first article mentioned is a muster of sulphur from the *Walirang*, which is part of the top of the mountain Arjuno, which rises inland of Sourabaya, and on the confines of Pasuruan, to the height of about 10,000 feet—two different measurements giving it, the one a few feet above, and the other a few feet below, that height. It is, like most other mountains of Java, an old volcano, and from one of the tops, a little smoke may still occasionally be seen curling upwards. From the Gunung Kendang, which extends throughout the whole length of Java, at intervals, and appears again in Sourabaya, in the shape of lowish ridges, there were limestones, marlstones and a sample of *Mica*, which is here found in plates and films mixed with the *Limestone*, and some of which was used for ornamenting the pinnacles of the Mahomedan Grand Mosque, put up in Sourabaya, a few years ago, under the direction of Mr Waardenaar. There were also two musters of ochre—red and yellow—procured from the Kendang and from Gunung Sari, a place only six miles outside the town of Sourabaya, where the Kendang approaches the Straits of Madura.

From Gunung Sari were also present some "*Gips-spaath*," a variety of gypsum, which is of very frequent occurrence in the west end of Java especially on the Jasinga Estate, where it occurs in veins or flakes embedded in the black chadas or tuff which is of marine origin. It has a somewhat glassy appearance, and when in thin plates, is semi-transparent. There was also a bottle of Petroleum or earth-oil found at Gogor in this Residency. The same earth-oil occurs also at Gunung Sari above mentioned, where I have seen it collected in holes sunk in the ground, and into which it naturally oozed, collecting on the sur-

face of water. Another natural production was earth-rosin from Madura; this is called *Sella*, and means in Sanscrit *a stone, a rock, a hill*. *Sella* is found in many parts of Java, particularly in the Western or Sunda districts, where it is mixed and melted with oil, and then forms an adhesive paste, in which the goldsmiths set their gold to work it into filagree or ornaments.

There were several native grave-stones made of the white Grissee limestone. No. 20 of the Catalogue of Sourabaya Articles consisted of "Seven fruits of the *Mojo* tree, gathered in the forests of *Mojopahit*." The following notice was attached to them, written on a bit of paper—"Seven fruits of the *Mojo* tree (*Cratæva Marmelos*) gathered in the forests of *Mojopahit*, and representing the origin of the name."

The largest of these *Mojos*, according to Javanese pronunciation, but *Maja* in Malay or Sunda, are of the size of a man's clenched fist, but two of them not larger than a good fowl's egg. Six of the seven *Mojos* have been scraped clean, and present a brownish hard shell. The contents have been removed, through a small hole, and the aperture at the end is plugged up with a black bone-stopper. One of the *Mojos* is left untouched, neither the outer skin or film, nor the contents have been removed—this latter fruit is nevertheless *very light*. This is thus the same kind of fruit, which many hundred years ago gave its name to the ancient capital of Java. It may be interesting to insert what Raffles says of the circumstance, at page 98 of his quarto History of Java—"Raden Tanduran arriving at the River Guntung, took refuge at the house of a widow, and afterwards meeting with his sister, who was performing a penance on the Mountain *Chermai* (the Mountain of Cheribon), he was encouraged by her to proceed further east, following the course of a bird which she desired that he would let loose for the purpose, till he reached the district of Wirasaba. Here he observed a plant called the *Maja*, entwined round a tree. He wished to eat of the fruit, but finding it extremely bitter threw it away, and asked one of his followers, *Kiai Wira*, the reason of its bitterness. "I have heard," replied *Kiai Wira*, "that it was here your forefathers fought in the war *Brata Yudha*." On which the prince said, "then let us stop here and establish our kingdom, and let us call it *Majapahit*." This was in the Javan year 1221." It appears thus that the *Maja* grows on a lianne or climbing plant. To this day *Mojo* is a favorite compound of words in the name of places in this district, as *Mojokerto*, the present seat of the administration of the country—*Mojo Agung*—*Mojo Sari*.

Another vegetable curiosity from *Mojokerto* is a "Cocoanut without eyes." It has a label attached to it, on which is written—"a Cocoanut—*Kalapa*—without eyes, from *Raden Ario Chokkro Poorbo Negoro*, *Patih* of *Mojokerto*." The *Patih* is the assistant of the Regent, his right hand man, who does all the tag-

work and attends to details, such occupations being inconsistent with high rank and good pay, a theory which the Javanese perfectly understand. This Cocoon is of the usual size of such fruit, but has no appearance of eye or eyes at the end, though made clean to the shell.

Nos. 25 to 36 of the Catalogue, are a collection of *Antiquities* from Majapahit, and are curious, as having belonged to a people who once held sway over great part of Java, previous to the introduction of Mahomedanism, in about A. D. 1478, and thus before Europeans had doubled the Cape of Good Hope.

No. 25. Six Krisses; antiquities dug up near the ruins of Majapahit. These are of *iron*, and much resemble what are still in use.

26. A Prince's dagger—Bedomo—dug up near the ruins of Majapahit. A rude iron knife, with rather prettily worked metal handle of brass; worked to resemble a kind of fine matting.

27. A Chopper—golok—of iron, dug up near the ruins of Majapahit.

28. Five Spears, of iron and ancient looking, dug up near the ruins of Majapahit.

29. A brass Axe of this shape
ruins of Majapahit. The
hollow tube for the pur-
a handle.



dug up near the
upper part is a
pose of adapting

30. Two Bowls—antiquities.

31. A Porcelain Jug, dug up near the ruins of Majapahit. It is of a *deep blue* colour outside, and looks as fresh as if of modern date. The earthenware within is *white*. The snout, or pipe to pour from, has been broken off.

32. An Earthenware Ball—an antiquity; it is a round dark colored ball.

33. A Lamp—an antiquity from the times of Majapahit. This is a square, or rather slightly oblong metal tray, with the edge turned up all round, to the height of nearly an inch, with a metal bow over it, at right angles, inserted at middle of each side, by which to hold or hang it up. Each of the four corners projects a little, and has a channel cut on it, in which a *wick* could *hang over*, and burn with oil, supplied from the tray. A similar sort of tray-like instrument is still used, when representations of *Wayangs* are given.

34. A Saucer—antiquity—marked as from Majapahit. It is a white, stout, glazed saucer, with the enamel much cracked. This saucer is nearly flat and round; is about six inches in diameter. A white piece of Earthenware, with glazed surface, apparently stout, strong ware—looks like a stout Chinese saucer.

35. A Bell—an antiquity in metal.
36. An Ivory Kris-handle—an antiquity. It is a piece of white ivory, four inches long. The sides are *flat*, and carved on either side. On one side is represented a man ploughing, with the common Javanese Sawah plough, such as used in the irrigated soft lands. This plough is drawn by a pair of *buffaloes* attached by a yoke on their necks to the pole of the plough. The man wears a *Tudung* or kind of hat with broad brim, and has on *Pokek* trousers, which do not come down to his knees. On the other side of the handle, is also represented a man with tudung and pokek, dragging a pole.

We now return to modern manufactures, and the first that attract our attention, are objects in *Tortoiseshell*, which are numerously made by the natives of Sourabaya, and hawked about the streets, chiefly for sale to Europeans. These consist of trays to hold fire sticks for lighting segars—armlets for ladies—rings for holding table-napkins—various little pretty covers for glasses, to keep out insects—combs and pins for ladies hair—segars cases. Next come objects in *Ivory*, as—kris-handles, an image of Napoleon, image of a woman, billiard balls, chess-men, ivory and tortoise-shell buttons in variety. Four Nautilus shells ornamented with fancy carving—two mother o'pearl large rice-spoons. And of *Horn*, a smoking pipe, two salad forks and spoons fixed together, like a pair of scissors, paper knives, hooks for bed-curtains, a walking stick, being a rod of iron, on which were adapted or strung a series of prettily cut horn, besides some other trifles.

GRISSEE, which also forms a district of the Residency of Sourabaya, and the town of which is only 12 pauls or miles removed from that of Sourabaya, had sent a collection of *Brass-ware*, for which it is celebrated, as well as for ship-building. These articles consist of waiters or trays, bowls, siri boxes, candlesticks, lamps, bells, spittoons, machines for what is otherwise called *ironing* linen, kettles, cooking pans, two small cannon, kris-sheaths, brass ornaments for native clothes-chests, and some other trifles. Also a pair of gilt wooden curtain hooks, with dragon's head ornaments.

From Sourabaya itself, again, was a model of the "Floating Dry Dock," which is kept in the basin at Sourabaya, near the mouth of the river Kalimas. This basin is very extensive and has been constructed during the past six years, and which not only contains the floating dry dock, but affords room for many ships to lay around it in safety. It is surrounded by wharves and warehouses to contain tackle and ship's materials. The floating dock is an immense building of timber, and large enough to admit a line of battle ship. To gain admittance, the dock-doors, which occupy one end of the dock, are opened, when the machine, letting in water, sinks. The ship is then got in and moored, the dock-

doors closed, and a steam engine pumps out the water, leaving the ship in a dry dock, when the bottom can be got at, and repaired or recoppered. This model was made by *Javanese* workmen at Sourabaya, and does them much credit for the neatness with which it is accomplished. This floating dry-dock has now been some years in use, and affords great satisfaction, not only for the repair and examination of ships of the Dutch navy, but also for the repair and examination of merchant vessels, which happen to require repairs or recoppering in Java. The use of the Dry-dock can be got from Government for this purpose on paying a fixed rate, according to tariff.

There were also the model of a rice cleaning mill put up at Mojokerto in the Residency of Sourabaya—and a representation of a *Bazar* at Sourabaya, consisting of sheds, stalls, &c., with the natives and their wares, prettily painted and characteristically got up.

The following articles were also exhibited, and call for little comment:

Model of a Chompréng or river cargo boat.

” a Prow Sëkong, which is made of one log of wood, very sharp fore and aft, with long out-riggers to prevent its upsetting.

” of Pedaties and Carts.

Wooden Playthings, representing men and animals, meant for children, made at Grisse; some baskets and chair mats made of pandan leaves and bambu, made on the island of Bawéan.

Two Fruit baskets, prettily got up, with painting and gilding: these baskets are carried by the women, when they go a-visiting, or to attend marriages and feasts.

Rice baskets and Rattan mats.

Some cotton and silk clothes from Bawéan, mixed with gold thread.

A piece of Cloth from Sourabaya, richly interwoven with gold thread and called “*Sonket*.” There were also other articles of native dress interwoven with gold thread.

From the Government construction-shop in Sourabaya, which is part of the Arsenal, there was a carriage wheel, the rim of which was made of one piece of *Waru* wood (*Hibiscus Similis*) which had been bent in circle, by artificial means. It was bound with an iron tire and seemed a stout serviceable wheel. A set of Sieves, the circles of which were also of *Waru* wood.

Two cases of Surgical instruments, well got up.

Some articles made of Gettah Percha, as water buckets, buckets for fire engine, and a “pocket pistol” for soldier’s use in campaign.

A saddle and appurtenances made of native leather, of which several hides were also exhibited.

From Sumenap, at the east end of the Island of Madura, and belonging to the Residency of Sourabaya, were several articles, the productions of nature, as:—

Musters of Lime and Sand Stones.

" of Coals and Earth-oil.

" of Mica, called Muscovy Glass.

" of eleven sorts of Oils, as Jangkong, Wijen, Jarak, Kalapa or Cocoanuts, Kasambi, Katujo, Jarak Kalapa, Kachang China, Kamiri, Nyamplung and Kalinchong.

A Sabre, with silver ornaments } made by the old and venerable
Two Goloks or native choppers } Sultan of Sumenap, himself, who
with silver sheaths. } with his literary attainments,
seems also not to have forgotten those of a cunning hand. This
venerable man is called Paku Nata Ning Rat, and is the same
person, who, 40 years ago, assisted Raffles in preparing his account
of the Kawi and other languages connected with Java.

Models of Native Boats—as of Prow Toop, Padawakan, Pachalang, Chompréng, Soppé, Paduwang, Waromon, and also three models of different fisherman's boats.

From Madura, itself, which is the west end of the island so called, and which also belongs to the Residency of Sourabaya, were present musters of minerals consisting of varieties of lime and coral stones.

109 musters of different kinds of woods, sent in by Raden Adhipati Kusumo Adi Ning Rat, but the Radin Adhipati had forgotten to mark and number or specify them.

13 Images made of a soft limestone, about 18 inches high, very well executed and characteristic of native manners, representing,— 1 a Bridegroom, 2 his Bride, 3 and 12 Mantris of the Spear bearers, 4 and 13 Great Mantris, 5 Arya, 6 a half-dressed woman, 7 a full-dressed woman, 8, 9, 10 court attendants, also sent in by the Raden Adhipati Kusumo Adi Ning Rat.

A set of Gamelan musical instruments, in miniature.

22 figures, representing posture makers or dancers on state occasions. Besides these, there was a great variety of native articles of dress or use, ornamental or otherwise, including basket-work &c. which were worth inspecting, but call for no particularization here.

PASURUAN was the next Residency which presented itself. It had several articles, which it must have cost much trouble to collect, the interest of which, however, was often lost, for want of a little care in marking or denoting them in the catalogue. Thus there were 220 musters of different kinds of wood, without name or mark. "A case containing Barks and Roots" of which the catalogue gives the names, but there was no means of identifying them with the articles themselves. Furthermore "a case containing different seeds, fruits and leaves" with some names in the catalogue.

It is a pity that many similar articles from other residencies were not more carefully numbered and labelled, so that they could have been identified with their names, as many a one curious in these matters, might have learnt a useful lesson, but finding them, as they were, without mark or number to identify them, much vexatious disappointment was the result, and the otherwise praiseworthy exertions of those who had collected them could not be appreciated.

Here were found three whetstones from Malang called "Batu Ungkal," some "limestones" from Malang, of which one was marked "batu mas" or gold-stone, and it certainly did not look like lime. Another was called "batu bintang," or star-stone from Mount *Klut*, which had a white quartz look. It may be some crystal of lime, but this is very doubtful. Such names as "gold-stone" and "star-stone" excite interest, and a desire to know more about them, but this was not vouchsafed.

"Some pieces of fossilised wood" were petrefactions of bits of sticks or twigs. Amongst four "musters of different earth-fruits" were "*Ubi Dudong*," a large round root, 15 inches in diameter, which in its naked, exposed state had thrown up a stout shoot, two feet high, which on the 14 October, was about to burst into a head of leaves, showing the great nutritive strength of the yam, which, while laid bare, on a table, and under the cover of a house, could thus shoot out.

Another somewhat similar bulbous root, about 10 inches in diameter, was the *Gadung* (*Dioscorea triphylla*), this had sprouted where it stood in the Exhibition, and sent up a vigorous green shoot, which had climbed up one of the brick pillars of the building, and then run along a beam, and was perhaps 100 feet long. Wild, in the jungle, it sends up its stem or vine, in the dry season, say in July, and it remains vigorous till the close of the year, when it dies away, and for nearly the following six months is not seen above ground, but the yam is then in perfection in the earth. The stem in growing and forming new bulbs exhausts the old parent stool. The *Gadung* is sought for by the natives in the jungle, in the early part of the year, before their new paddy crop comes in and it helps them to eke out their scanty fare. It grows all over Java.

A case contained 32 musters of different varieties of paddy.

There were samples of seven varieties of flour made from roots in Pasuruan and called Kiring, Katella Jawi, sago, arrow-root, Katella Blanda, Temulawak and Temugedring, either used medicinally or as delicacies for invalids. There were specimens of coffee, but to my surprise, none of sugar, although this residency has produced the finest results in sugar cultivation and making of any in the island of Java. There is perhaps a good reason for this. Though Pasuruan has made the most sugar per bow of any

place in the island of Java; in the case of one fabrick indeed, viz., of Pandahan, as much as 80 piculs per bow or $45\frac{1}{2}$ piculs per English acre, the sugar itself has often been of a very vile and inferior quality, as the fabricants found it their interest to make bad sugars, but plenty of them, which government were forced to receive at fixed rates, according to contract. Alas! these old contracts have run the term of their natural existence, and have, like all things human, come to an end. They have expired or are about to expire. A change has come over the spirit of the dream, *tout cela est maintenant changé*, and the contracts are now renewed to work and deliver sugars according to the standard musters of the Netherlands Trading Company. Are we to trace this want of sugar musters from the chief sugar district of Java, to this little *contre-temps*? The fabricants were ashamed to send specimens of their old sugars, and have not yet learned to make *good white* ones! But the Schoolmaster has gone abroad amongst them, and will no doubt soon teach them! The sugar fabricant on Java, in these degenerate days, is a very docile animal in the hands of the government. It is to be hoped, however, that Pasuruan is now only passing through a chrysalis state, that it has sloughed off the filthy form of the grub, along with the numbers 6 and 8 of sugar, and that the chrysalis will soon fly abroad in the gay butterfly attire of Nos. 16 and 18, nay even of 20, and show that the "rich flats" of Pasuruan can produce fine *white* sugar in satisfactory abundance.

The only muster of tobacco present from Pasuruan, was a roll tightly tied up, and very poor as far as could be judged from the *outside* of said roll. The 12 fans of lorowestu roots have been mentioned elsewhere, under Madiun. There were models of tools and agricultural implements, and of coffee cleaning machines and mills. The models of the houses of the natives of the Tengger mountains were interesting, as being different from what is elsewhere seen on Java. Whole families and relations live under one roof, in long buildings of wood or bambu, perched upon terraces, cut out of the face of their precipitous hills.

Amongst the articles of Pasuruan, was also a round black ball of the size of an orange, called *Impis*. This is a toadstool, and is a tinder-like furze ball, used medicinally, but in what cases, there was no means of learning. But as natives think nothing of a medicine, which is not good for *every* complaint, this was perhaps of less consequence.

In another place, I found a few leaves marked "Daen Boeloe Oongoe Vergift." This is probably "Daun Bulu Ongko—Poison." The first word *Dawn*, means leaf, and *Bulu Ongko* is, gentle reader, the name of the celebrated "*upas tree*" of Java, so celebrated since Foersch told his tales about it, in the last century. It has not, however, found its way into the printed catalogue of the

Exhibition, and no doubt "Daen Boeloe Oongoe Vergift" will be passed over by 99 out of the 100 visitors of the Exhibition, without even arresting their attention. It is a pity that so remarkable a production, which is unknown at the west end of Java, should have been allowed to linger in such obscurity. And though the specimens present are only a few withered leaves, yet many a Johnny Newcome would have gladly feasted his eyes upon it, had he known what it was!

We will conclude the catalogue of Pasuruan, by giving a list of Figures of antiquities, prepared in Malang, contributed by His Excellency the Governor General of Netherlands India, J. A. Duymaer van Twist, viz.—

Temple of Kidal.

Dewa Omo. Dewa=Divinity. Omo perhaps derived from Om, a mystic name of the Hindu divinity.

Yang Omo di Pati—Yang probably the latter part of the word called, on Java, at full length Sengyang, which means a supernatural ruling power. Omo as above. Di short for Adhi chief. Pati=Lord.

Dewa Sinto.

Gaja Endro. Gaja, Elephant. Indra, the Hindu deity presiding over Swarga or heaven.

Joko Dolog. Joko=young man, youth. Dolog=Sapling of the teak tree.

Buto Kumbo Yakso. Buto=Demon. Kumbha, a noted demon, the nephew of Rawana. Yakso=Devil.

Lembu Andini.

Buto Kumbini.

Topéng Buto (Demon's mask).

These are all beautifully executed in some white, softish stone, apparently a variety of limestone, which takes a very smooth polish. As works of native art, these are very praiseworthy, and add no small interest to the Exhibition.

BAZUKI and BANYUWANGI conclude the list of the districts on Java. *Bazuki* itself was very poor in its contributions, and had its articles arranged under only six numbers, the chief of which was No. 3 which consisted of 72 musters of different kinds of wood; these were large and carefully prepared, in short the best of the kind in the Exhibition. Under *Bazuki*, I found eight *Bintaro* seeds, each of the size of a man's fist, with a net work of stringy fibres. A little information attached to these seeds would have been very acceptable, but was looked for in vain. *Bintara* was the name of the first Mahomedan seat of government in Java, founded just before the overthrow of Majapahit in A.D. 1478, as related in the following passage of Raffles' *Java*, vol. 2, pages 123–24 of the quarto edition—"Raden Patah afterwards marrying the grand-daughter of Sunan Ampel, and leaving her

during her pregnancy, proceeded to the westward, in order to form an establishment, which he was directed to fix at a place where he should find the sweet-scented grass, called *Bintara*. This he discovered in a place where there were but few dry spots to be found, in an extensive swamp termed in Javan "Demalak-an," whence the contraction "*Demak*," first called *Bintara*." *Bintaro* is given in Roorda van Eysinga's Javanese Dictionary as "high, thick weeds"—and we may fairly conclude that these seeds are the representatives of those which Raden Patah found near Demak, when he founded the first Mahomedan seat of government in Java. These are little coincidences of great interest to those who care about old Java lore, and it is a pity they did not attract more attention in laying them out in the Exhibition. I never before, to my knowledge, saw the *Bintara* fruit, though often enquired for, and it is thus scarce.

Banyuwangi though only an Assistant Residency under Bazuki had made an effort to get up a respectable contribution, and extended in the list as far as No. 90 of different articles, which we will now glance at. First of all we have a specimen of sulphur from the volcano Idjén—then a muster of limestone from the Gunung Ika, which is a high, conical hill on the promontory, at the very east end of Java, at the entrance of the Pam-pang Bay. A whetstone from Serawat at the Grajagan Bay on the south coast of Banyuwangi, just outside the Straits of Bali. A bit of pumice stone, called *Batu Bantulas* found near Bajul Mati is used for cleaning weapons.

A sample of Agar-agar or bulang—a seaweed, white and like moss.

" of Akar Bahar=sea-root, used medicinally; small, black coral shrub.

Leaves, being musters of 25 different woods.

15 specimens of varieties of bambu, as bambu tutul, or the spotted gading, petung wulung, peting, ampel, orri, gabuk, bënë, serrit, batu, surat, tipis, pring, wuloh, lampar. The *bambu ampel* has a stout, thick wood of about the size of a man's lower arm, and is further worthy of note as being the kind of bambu whence the *kampung Ampel* in Sourabaya is named, and where the first Mahomedan teachers, at the east end of Java, established themselves.

A muster of Bidara Laut wood, kept by natives, scraped and mixed with drinking water, in cases of fever.

" of Tagerang wood, a yellow dye stuff.

" of Monengan wood, used for *dupa*, to be burnt as a pre-fume.

" of Kutu wood, a medicine.

There were also different sorts of barks used medicinally, as well as leaves, roots and fruits for the same purpose. Among the fruits was mentioned the *patma*, but the specimen was very bad, and nothing to be made of it.

Among the fruits was mentioned one called *Widani*, as written upon the article itself, but no doubt incorrectly in the catalogue *Widoni*. The widani is a fruit an inch long, with five projecting angles, or longitudinal edges. Bits of the root of the widani are close by numbered 16. This plant has very likely given its name to the river of Buitenzorg *Chidani*, though I could never hear of a Widani plant in the Sunda districts, which may nevertheless exist, but be scarce.

From Banyuwangi was also present a bottle containing one of the renowned poisons of Java, viz. the *Anchar*, which could not be further judged of, than that it was a *black liquid* in a bottle. The other virulent poison mentioned in the catalogue, but nowhere to be seen in the Exhibition, was *Chetik*. A description of experiments with both these poisons is given in English, in one of the volumes of the transactions of the Batavian Society, published by Dr Horsfield, during the English time on Java.

There were seven specimens of different substances for rope work, viz. waru bark, tangkil bark, bagu bark, filaments of the pine-apple plant, filaments of the plantain tree, kachiplak bark, and gumuti from the aren palm. The *bagu* bark was white, and net-like, entangled and interlaced like that of the *Tœurëup* or *Artocarpus elastica*. Five specimens of cochenille, produced in the government establishment, a few miles inland from Banyuwangi, which is a sort of agricultural establishment for the reform of vagabonds, and persons condemned for a short time for some petty crime.

A few *Unem* Shells, used medicinally, evidently the "opercula" of some monovalve shell.

A white stone, cut and prepared for a grave stone—got on Gunung Ikan, a fine even substance—white and apparently limestone.

A kris-head made from a fish's tooth } both prettily carved.
" " horn

Model of a "kris," a good imitation of iron, with the pamor or damask brought out.

Besides these were musters of cubebs, long pepper, cardamoms, coffee, indigo, tobacco, paddy and rice, white and red onions, kapok or tree cotton, used for stuffing bedding and pillows, true cotton, and the widuri, arrow-root flour, tripang, honey, wax, some kind of white fatty matter for making candles, but without even a name or other information; a bundle of porcupine quills, deer's horns, edible bird's nests, peacock tails, some small pearls, and the shells in which they were found. As also several models of agricultural or household implements, buildings, prows, basket-work and fishing tackle. A few articles in cloth for native dress, and a few skins of monkeys and tigers.

From this it will be seen that the men at Java's furthestmost

extremity had done much to elucidate their industry, and contribute to the interest of the Batavian Exhibition.

Most of the Islands of the Archipelago, besides Java, had sent collections, containing articles similar to those exhibited by Java, including both manufactured articles, and the raw produce of the soil. It will, for the most part, be unnecessary to enumerate these, but we will take the different islands in succession, and mention such articles as appear to claim notices.

BALI had five small figures representing the Gods of the Hindu mythology:

Two images in ivory, representing Siwa; each was about 6 inches high and very beautifully worked.

Two images of sandal-wood, representing Vishnu and Siwa.

Some Bali manuscripts on the lontar palm leaves, put up in neat cases.

A sword with golden ornaments, the handle was of carved ivory, like what is used for kris handle.

Two krisses with golden ornaments, both these weapons were very handsome.

A new Bali-made gun or rifle, used by Gusti Jalantik, in the war with the Dutch, a few years ago. Gusti Jalantik was a brave leader of his countrymen, who had much insulted the Dutch, and on one occasion put his kris into and cut through a paper containing a treaty, which he thought his country ought not to submit to. This man met a warrior's death, and was slain in battle.

There were other Bali warlike weapons, as rifles and guns made by themselves, bows and arrows, blow-pipes and their arrows, spears, krisses, swords and war-clubs, besides some articles for domestic use.

SUMATRA'S WEST COAST had sent specimens of minerals and metals as:

Gold ore from Gunung Padang.

Gold dust from Natal.

Lead ore from Mandhiling.

Copper obtained in the uplands of Padang.

Bottles of different mineral waters.

Specimens of woods found in Mandhiling and Natal.

A piece of Camphor wood from Natal, said to contain crystals of camphor, but which I could not discover.

Camphor oil from Mandhiling and Natal.

Dragon's blood from Priaman, Mandhiling and Natal.

A muster of Getah Percha from the "Balam Sudusudu" tree.

" of India Rubber from the "Kajay" tree.

" of Rosin from the Bintangur and Miranti trees.

" of Lagan oil from Mandhiling and Natal.

" of Ambalu, or gum lak from Natal.

" of Sakou, also called jagong geereh, with fine small seeds.

A muster of Samawang oil.

There was also a collection of fine filagree Padang silver work, for which the country is so renowned. The specimens here shown were certainly very choice, and you must admire the delicacy of the execution, the more when you consider the very rude implements with which the natives work. There were what were called "Two Lady's Garnitures," consisting of a chain-like ornament to be worn round the neck; two armlets from the wrist, a pin, two ear-rings, and two hair pins. Of these the armlets were the most admirable for the delicacy and execution of the work. To these were also added a silver filagree segar case and cup worked in the style of the armlets.

The Nias, Batu and Poggi islands, lying off the West Coast of Sumatra, had also sent bracelets, ear-rings, and other ornaments for native women, in gold, tortoiseshell and kima shell.

Some very pretty white flowers, made from the Sulang-sulang plant, are in use to ornament marriage beds.

A stone seat or chair of some white soft stone, 10 inches high by 6 inches square, with a blunderbus carved in relief on one side, and a kris on the other, was said to represent the chair of the "spirit of the earth," existing at Barugulasara, on the island of Tello.

From the Batu islands were also a warrior's cap, jacket and klewang or sword, ornamented with incantation substances.

A dagger such as used at the Poggi islands, with bows, arrows, and shields from the same locality.

A Malay weapon called a *Kurambi* was curious, and of this shape,



curved almost in a semi-circle, sharp on both edges, and with a very sharp, hooked point; must be a terrible instrument in close contact. The end of the handle has a round hole through it to put a string, and so wind it round the hand or wrist of the user.

Two castings of 4 inches high representing men's heads, sticking out the tongue in a deformed but threatening manner. These were made at Tanah Datar from copper ore procured in Timbulan of the 20 Kotas.

From the Padang Uplands (Bovenlanden) there was a very good collection of articles sent by Colonel Van der Hart, who was long Resident there, and is now removed to the charge of Macassar; these consisted of:—

A muster of quartz containing Gold, which, however, could hardly be described.

Some specimens of Copper ore.

Some specimen of Lead ore.

" of Tin ore.

" of Iron ore.

Some bars of Iron, apparently very good—8 inches long.

" of Copper, " " 10 " "

" of Tin " " 12 " "

Specimens of ore of Quicksilver—it was dry brown dust in a bottle, and very heavy.

" of liquid Quicksilver in a bottle.

" of Sulphur, marble, alum, getah percha and India rubber, of 560 different kinds of wood, which, however, were too small for giving a good representation of the articles.

" of Nutmegs, mace, and a few other trifles.

PALEMBANG had also a pretty good show, but contained few specimens of novelty, if we except the following:

A white glass bottle containing specimens of *Batu Bulu*—hair stones—found in certain varieties of bambu. The pieces were of the size of peas, and were no doubt a variety of *Singhara*, which often occurs on Java, as an incrustation of quartz matter, *inside* the tubes of bambus, in the Sunda districts.

Musters of Gum Benjamin, and of Damar Mata Kuching and damar tanah.

The mata kuching or cat's eyes; is the gum copal of commerce, and is sent to Europe for purposes of varnishing.

A Rhinoceros horn, though only a small one.

Some heads of the Ivory Birds, called in Malay "*Burung Gading*" which implies the same thing. The heads have a horny top on them, which is red, and from this projects a *white*, pointed beak, which from its colour, is like gading or ivory.

A varnished rocking chair, as neat and good as a Yankee could make it.

Six hanks of Chinese flax-silk, made at Palembang.

Two pocket handkerchiefs very handsomely worked in open or net-like lace work. These were white and apparently made of some fine flax, or perhaps of the films of the pine-apple leaf, but the catalogue merely calls them "some open worked handkerchiefs," and no other information regarding them could be gathered.

BANKA had several specimens of *tin ore*, for which metal this island is so famous, having produced—

in 1850	59,683-50	piculs
" 1851	77,707-43	"
" 1852	78,301-02	"

The produce of 1850 appears small, but a large quantity remained at the mines, at the end of the year, and was not thus received into the government stores, viz. 15,456-25 piculs, which was worked up and accounted for in 1851, so that the quantity ap-

parently received in 1851 was 93,163-68 piculs, and thus the quantity belonging properly to 1850 was 75,139-75 piculs and the average of the three years 1850-2 will thus be 77,049-40 piculs. At the end of 1852 there were still remaining unsmelted at the mines about 2,262 piculs to come into the produce of 1853. Tin has, a couple of years ago, been proved to exist also in great abundance on the neighbouring island of BILLITON, and from musters sent to Holland, and analyzed by Professor G. J. Mulder of Utrecht, it was found that the ore contained 97.01 and 97.03 per cent of tin oxyde, and it was estimated that if this ore was well washed, and cleared of quartz particles, it would still contain 76 per cent of pure metal. The total produce for 1853 in Banka, has been estimated at 82,000 piculs. From Billiton was a case with specimens of iron ore, and of iron found and made in Billiton. The large case contained iron ores &c., in various stages, till it was shown in the malleable state, of which latter several good specimens were seen in the case. This box was not alluded to in the catalogue. The tin costs the government on Banka, as received from the Chinese, f 13.50 per picul.

There was in the exhibition an interesting model of a tin mine on Banka, with all the buildings and appurtenances thereunto belonging, and the Chinamen busy with the excavating and smelting. It is well known that these mines are all worked by Chinese under the superintendence of the Dutch authorities, who receive all the tin made, at fixed rates, for account of government, who also supply the miners with rice, oil &c., from Java, at certain rates, the island of Banka not producing the staff of life, rice, in any quantity of importance.

There was also a representation of the gathering of bees nests from an hereditary tree called *siolan*, of a native's hut, situated in his rice-field in the jungle, (ladang,) and of the catching of fish by means of nets.

BORNEO had of course musters of gold dust from the west coast, from Montrado, Landak and Mandor; and of coals from the south east coast, from the government mines at Pangaron near Banjermassing; this muster of coal was a square block or cube of 15 inches each way. From the same division of the south east, was a piece of mountain crystal, larger than a man's head, but of only a dirty white colour, while from Karimata island, on the opposite coast, was a specimen of black crystal.

Mr C. Kater had sent a rifle gun with silver mounting, entirely made at Pontianak, with sundry appurtenances. Mr R. C. Van Prehn had sent in a collection of Chinese weapons entirely made on the west coast of Borneo, consisting of *lilaks* or native swivel cannon, guns made after European and native fashion, flags for mustering the men, shields, swords and spears &c. It will be remembered that the Chinese miners on the west coast of Borneo,

are very rebellious subjects, and have at various times given the Dutch much trouble, and cost military expeditions to keep them in order, and only lately a serious rebellion amongst them had to be put down by the strong arm of the soldier.

There were also other specimens of weapons made on the south east coast of Borneo, and manufactured from iron found and smelted in the country, viz. of a rifle and a pair of pistols, along with a sabre.

There was also a piece of cloth manufactured from the fibres of the bark of a tree, coloured like batik work, in red, black and white; this cloth is manufactured by the Dayaks of the interior.

A handsome cloth interwoven with silver thread; and a piece of broad gold lace, both made at Banjermassing, must conclude our list of the big but rude island of Borneo.

The government of MACASSAR on CELEBES next took its turn, and there had evidently been good exertions made to make its collection attractive. There were several wooden figures of men and women in characteristic costume, which were very well got up, and added much interest to the exhibition, being placed in a conspicuous position, in glass cases near the door-way; we will take a glance at them.

✓ No. 35 of the catalogue represented a prince in grand military attire, made and sent in by the Lieutenant of the Malays at Macassar, Tajudin.

„ 36 was a prince in grand bridegroom's attire, sent and made as above.

„ 37 was a princess in grand bride's attire.

„ 38 was a prince in court dress, made and sent by the Captain of the Malays at Macassar, Abdul Husain.

„ 39 was a young prince in court dress „ „

„ 40 was a prince in hunting dress „ „

„ 41 was a native chief in the dress of a champion, clothed in an iron chain baju or jacket, sent in as above.

„ 42 A Macassar bridegroom „ „

„ 43 was a Macassar bride „ „

These nine figures were all very well executed and do the workmen and contributors much credit; the dresses were not only rich and natural, but the countenances were well done, from the proud and fierce bearing of the chiefs and warriors to the modest and demure looks of the brides, who were about to pass into a new state of life.

It must not be forgotten to be observed that the figures were all decked out in their jewellery and gold ornaments; the men with their krisses in gold sheaths handsomely got up. These ornaments and weapons were *no sham*, but the real articles themselves, such as used, and lent for the purpose by Daing Pasauw, Abdul Husain, Tajudin, J. Lohama, and Gang J. Uchu; whose

names are worth while recording for having got over the inherent aversion and fear of all natives, to let such articles, which are usually family heir-looms, go from their hands, for the gratification of the public in Batavia. No 44 represented in wooden figures, about a couple of feet high, the "Paséré Molukku," or war-dance of the Molukkos, as still performed by the inhabitants of the Kampong Molukko at Macassar. They were dressed gaily in red and white, with gold tinsel in bands across the body. A sturdy chap, with a black over-all-gown dress, fastened with a girdle, and wielding a staff, seemed to be the master of the band.

From His Highness the King of Goa, was a "Baju Ranté" or war "chain jacket," similar to the one above mentioned, as worn by one of the figures. This was also made of small iron rings fastened together like a net, and when only cutting instruments were known, such as krisses, spears and klewangs or native swords, was no doubt of good service to the wearer, but in these days of powder and shot, would hardly prove of much use. In the traditionary lore of the Javanese, allusion is sometimes made to "chain jackets," but they have long ago become a mere tradition on that island.

Macassar was not deficient in other articles, as will appear from the following:—

Some specimens of *Pamor* iron from the mountain of Luwu; the *pamor* is the damask work in their iron weapons.

More Spanish flies from Bulekomba and Bonthain.

Two specimens of the small fishes called *Luré-luré* determined by Dr Bleeker to be "*Engraulis Brownii*." When they are prepared for use they are known as the "red fish of Macassar."

Two specimens of the *Sibula* or native herring the "*Sardinella Clupeoides*" of Dr Bleeker.

Some preserved roe of a variety of flying fish.

A specimen of "*Parakha adie tedang*," or glue made of buffalo milk.

Some spears and cutting instruments.

A *Ladung* or instrument to take tripang, or sea slug with.

Weaving implements, basket work, a muster of paper made from the aloe tree, some articles of dress &c. helped to swell out the interest of this collection, but call for no particular comment.

MENADO, or the north east end of Celebes, had also sent its contribution, but it contained only two articles which I did not see elsewhere, the one a specimen of *Pacheda*, or the pith of some plant; it looked white, like marrow, and some prettily and curiously woven riding whips, made of rattan.

We now come to the **MOLUCCA ISLANDS**, amongst which the contributions from **AMBOYNA** figure conspicuously.

A case contained a great assortment of specimens of wood from Amboyna itself, from Saparua, Buru and Ceram. These were very neatly put up, but were very small.

A round table from Ceram, made of one slab of wood, 6 feet in diameter. The Moluccas are renowned for these large table pieces. A case containing the herbs and plants from which the *Pinang Rachi* is made. These appear from the catalogue, which gives the names of the ingredients (but unfortunately sometimes twice over), to be 56 in number. There is also a muster of the *Pinang Rachi* itself, which is a great medicine or panaceum, as it well deserves to be, from the number and variety of its contents, which appear to be only the above mentioned finely cut up.

There were also from Amboyna, the following which do not call for more than a passing note—

Sponges and agar-agar from Nusa Laut.

From Amboyna itself, three specimens of sago, with the flour and bread made therefrom, along with the forms or moulds, in which they are made.

Four specimens of cloves from Amboyna and Saparua; and in another part were some very neat houses, boats &c. &c. made of cloves, and prettily executed.

A specimen of *nutmegs* grown on *Amb oyna*, with samples of the *mace*.

Samples of preserved numegs, and mother of cloves.

„ of cocoa from Amboyna.

„ of gums and rosins from Amboyna, Ceram and Buru, as damar sela, gendara damar, damar bonari, damar itam, damar tumi.

And from the same islands 20 samples of essential or scented oils, of which it may be interesting to give the names—

Lemon, chulan, dilar, chindan or sandal wood, kulit lawang, kalensusun, kayu manis or cinnamon, kananga, chengke or cloves, bunga, palasari, tanjung, pandan, kojamas, pulasari, pala or nutmeg, melati, bintangur, seree-Bande, kayu putih. The last is the celebrated oil of that kind so well known in Europe, and used in times of cholera; the Malay words mean “white wood.”

A variety of twine, made from various plants.

A box of cowries, “bia chongka,” used as money in some of the islands of the Moluccas, by the half wild tribes.

Tortoiseshell from Ceram.

Two kasuari's eggs, ornamented with engravings.

Spoons made from the nautilus shell.

Marbles for children made from the chama gigas.

Three bouquets, as also four boxes of flowers made of feathers at Hila and Amboyna, beautifully executed with different coloured feathers, to represent the natural tints of the flowers. This is another of the wonderful productions of art in the Moluccas.

Bows and arrows, spears and shields of the Alfurs or half savages of Ceram.

A set of native boxes, *tatumbu*, ornamented with shells from Ceram.

Three birds of paradise from Ceram.

Some articles of dress, of tree bark, of the Alfurs on Burn, and some of the tree bark itself to show of what the dresses were made, being the rude manufacture of savages.

Model of an "*Orembay*" of Ceram, a prow covered over in the middle.

Two small dressed figures showing an Amboynese bride and bridegroom, both looking as *spoony* as they well could, poor things, and tricked out in European dress.

TERNATE had also with praiseworthy care sent several articles to illustrate its native productions and arts, as follows:—

A specimen of gold from Bachian.

Specimens of woods, amongst which was of course ebony.

„ of tortoiseshell, mother o'pearl and 18 birds of paradise.

Some weapons of the Alfurs, as shields, which were very narrow, not more than 6 or 8 inches, but long, these are ornamented with white shells; they may serve to ward off the blows of any cutting instrument, but it would take a sharp eye and quick arm to dodge an arrow.

Two boxes called *kabila* covered with plates of talc.

Some very prettily stained *kajang mats*, which are made of the pandan leaf.

An image dressed up to represent an Alfur in war dress.

A curious wooden chain, cut out of one piece of wood, a couple of fathoms long, meant for a mosque door.

Two Orembay prows, each covered with a shed, over the middle part, with extensive outriggers on which the rowers sit.

BANDA was there, but shorn of its glory. It had but one single article, which was, gentle reader, "a sample of kanari oil."—see published catalogue, page 129. A stubborn fact! No nutmegs or mace, from this renowned seat of that spice? No,—None!!! The "reglement" had been religiously adhered to, the monopoly strictly enforced. ALL, without exception, must be delivered to government, and by them to the Trading Company to be sent to Holland for sale, lest peradventure some enterprising Hollander or interloping foreigner should lay unholy hands on it, and so still further injure the revenues of Netherlands India, which it has been acknowledged have to bear a yearly deficit, in consequence of the system of the Moluccas. Prudence therefore must have actuated the authorities at Banda, not to commit themselves by sending specimens to the grand exhibition of Netherlands India. The Governor-General had very likely neglected to issue an express permission,—a Roman Catholic "*Indulgence*," to break the law in this case. But this non-appearance of nutmegs and mace from Banda could only be the insane act of an Ostrich, which thrusts its head into a bush under the happy idea that its after quarters are also not visible. We luckily had plenty of

nutmegs and mace from other parts of the fine Dutch possessions in the Asiatic Archipelago. The neighbouring and presumptuous Ternate had even ventured to send some. From Java, the humble Buitenzorg had also dared to raise its head and send a supply and Benkulen had not failed to produce a goodly stoppered bottle of each. How the Singaporean nutmeg planters will crow, when they learn that in the capital of Netherlands India, at a grand exhibition of the produce of the Dutch possessions, Banda had not ventured to exhibit its staple produce! It is high time that this volcanic stone-heap either blew up entirely into the air, unregretted by the world, or that the government disabused themselves of the idea that a monopoly of nutmegs can be maintained, as it is now a-days nothing else than a mere farce.

TIMOR is the last place which we have to notice. It had :—

A specimen of gold dust.

A bottle of copper ore, in the shape of round dark colored knobs.

A piece of amber from Solor.

A small package of the bark of the "Pasolder" the "Kayu Timor" as known on Java, which is used medicinally.

A Timor sabre, with lots of long red hair attached to the handle.

A Timor spear, and a few other trifles

A muster of Timor bees wax, which is the best of the Archipelago and largely imported into Java for the purposes of Batikking, or tracing patterns on cotton cloth.

We have now gone over the whole of the Batavian exhibition, which, it will be perceived, contains a vast quantity of very interesting matter, and it is to be hoped that, before it breaks up, the commissioners, to whose hands the matter is entrusted, will draw up a minute and accurate account of every thing connected with it and of the articles exhibited, supplying much information that is not yet before the public, and which a casual visitor could not glean. Such a report is not only desirable for recording what has now been brought together, but might serve as a guide hereafter, as, at long intervals, say of 20 years, a repetition may be desirable for the rising generation.

JONATHAN RIGG.

Jasinga, 31st October, 1853.

ETHNOLOGY OF THE INDO-PACIFIC ISLANDS.

By J. R. LOGAN.

LANGUAGE.

CHAPTER V.

ENQUIRIES INTO THE ETHNIC HISTORY AND RELATIONS OF THE DRAVIDIAN FORMATION, EMBRACING NOTICES OF THE FINO-JAPANESE, CAUCASIAN, SEMITICO-AFRICAN, EUSEKIAN AND AMERICAN LANGUAGES.

THE preceding general conclusions, and the striking assemblage of affinities and contrasts of all kinds which the ethnology of India displays, point distinctly to a series of great formations, differing so much and following at such wide intervals of time, that each must have been connected with important revolutions in the dominion and distribution of the races of southern Asia, and perhaps of a still larger region. India, from its position and climate, was, from the first, destined to receive and not to send out dominant races. It has only been less recipient and passive than Asonesia. Separated by the Himalayan range, as the eastern islands by the sea, from the grand theatre of the collisions and dispersions of the Asiatic races, and having its peninsula protected on all sides by mountains and forests, not easily traversable, India has proved ethnically tenacious as well as impressible. It has required thousands of years for even the Arian race to appropriate it imperfectly, for the older races still remain in many places little Arianised, while the Arians have everywhere been more or less affected by contact with them. The diversified aspect of Indian ethnology carries with it a secondary stimulus to research, because a more exact knowledge of the races that have successively entered it, can hardly fail to reflect some light on the ethnology of the rest of Asia. But this also suggests the probability of our arriving at more rapid and, at the same time, more satisfactory results, if the older formations or their vestiges are still directly traceable amongst nations placed beyond India. I shall therefore endeavour to ascertain the distinctive characters of each of the principal Indian and the connected Ultraindian formations, and enquire how far it is possible to follow them into other regions. As in all enquiries of the kind, there is a double source of difficulty and confusion. Many traits are too archaic to have a direct bearing on the Indian history of these formations, for they are common to languages in the most remote parts of Asia and Africa, and some indeed to languages in all the quarters of the globe, while, from the great mixture of races and languages that has taken place in India itself, many characters are no longer

referable, with certainty, to the formation to which they owe their Indian origin. This makes it the more necessary to enlarge the basis of comparison. I begin with the Dravirian formation, not only because it is the oldest that can yet be recognized in India, but because its phonology connects it with the great formations of Asia and the analagous ones in the rest of the world, more closely than with the Ultraindian, Chinese and Tibetan. After considering the other harmonic formations with more immediate reference to the Dravirian, we shall find the path smoothed towards a solution of the ultimate question as to the ethnic place and history of the remaining Indo-Ultraindian formations. A previous knowledge of the direct relations between Dravirian and Scythic may be regarded as essential to the elucidation of the true relations between the former and the Tibetanised languages of India and Ultraindia. But the ethnic connection of Dravirian with Scythic cannot be ascertained without referring to the relations of both to the other harmonic formations. It is clear also that harmonic phonologies have spread over the primordial tonic and monosyllabic field, until it has been contracted to its present narrow limits in S. E. Asia. Therefore to understand the later ethnic history of the Tibeto-Chinese province generally, or of the Ultraindo-Gangetic languages in particular, we must first have some knowledge of the character and relations of the progressive harmonic formations.

SEC. 1. GENERAL CHARACTERS OF THE DRAVIRIAN FORMATION.

If we looked to race alone, it would be extremely difficult to say what the Dravirians were, or how far they had spread over India. But the language tells us, in no doubtful manner, that the race, or at least the linguistic formation, originated in one tribe, which carried its phonology and ideology, and a large portion of its native glossary, over all India from the Himalayas to Ceylon. This stock of the ancient Indian predominant race and language must have had a distinctive character, and that character is to be sought where there has been the least exposure to later influences. We must therefore, in the first instance at least, reject the Himalayas and all Northern India, where the old race has long been in contact with Ultraindians, Tibetans and Arians. It is in the South that the archaic physical type must be traced. The diversity even here is so great as to shew that there has been much mixture, but there are certain widely prevalent characters, most of which are not Arian nor Tibetan, and are even distinct from Ultraindian. The more important of these characters are a pointed, and frequently hooked, pyramidal nose with conspicuous nares, more long than round; a marked sinking in of the orbital line, producing a strongly defined orbital ridge; eyes brilliant, and varying from small to middle-sized; mouth large, lips

thick and frequently turgid; lower jaw not heavy, its lateral expansion greater than in the Arian and less than in the Turanian type; cheek bones broad and large, rather than projecting as in the Turanian type, giving to the middle part of the face a marked development and breadth, and to the general contour an obtuse oval shape, somewhat bulging at the sides; forehead well formed but receding, inclining to flattish and seldom high; occiput somewhat projecting; hair fine; beard considerable and often strong, colour of skin very dark, frequently approaching to black.*

The typical language of this race must be best represented by the languages of that part of India where the Dravirians are now most remote from the later races that have predominated in the basins of the Indus and Ganges, and where the physical characters are best preserved, that is, in the south. But as numerous tribes and dialects must have existed, it is necessary, while assuming the Tamil or Tuda as the linguistic type,† to take into account the varieties which it presents in the other languages which maintain distinct affinities to it. The general characters of this formation became sufficiently manifest in the course of the preceding chapter, so that it is only necessary in this place to recapitulate them very succinctly. The phonology of the purer Dravirian formation was harmonic, very agglomerative, polysyllabic, and, in a considerable degree, flexile and agglutinative. It was distinguished by a strong tendency to liquids. Its elementary sounds were numerous, and amongst them were peculiar cerebrals, dentals, sibilants and nasals. In its finals it affected liquids (*l, r*). Its roots were monosyllabic, but the agglutination of definitives and other particles with them, generally postpositionally,—and the predeliction for compounds rendered the vocabulary mainly dissyllabic. In ideology it was crude, participial, inersive, and postpositional. The flexile and harmonic phonology gave it an incipient flexional character. The pronominal system was well developed, and possessed flexional traits pointing, glossarially, to a different origin from the postpositional serviles of substantives, and being evidently based on a prepositional ideology. The plural of the

* For details see Chap. II. As in Africa, Ultraindia and Asonesia, a smaller, more Turanian and less Semiticised type is still preserved, although variously crossed. The higher type described in the text is evidently a mixed and much improved one. It will appear from the evidence, adduced in the course of this chapter, that the successive Turanian predominant races and formations and the Irano-Semitic, have, in turn, influenced all the great outlying southern provinces, Africa, India, Ultraindia and Asonesia, the last, in general, indirectly through Ultraindia, Ind-a and Africa.

† While we may conclude, from the ethnic character and position of the ancient Indian population, that it belonged to the small Turano-African type, we cannot infer that its linguistic formation was the pure Dravirian. But, in the present state of our knowledge, we cannot with certainty go beyond the era when the Indian linguistic type was of a crude Draviro-Australian character. The actual Dravirian must necessarily deviate considerably from its earlier Indian form. Successive modifications of race, going on in India from times long anterior to the Arian or even Tatar eras, imply linguistic changes also.

first person had exclusive and inclusive terms, and the third person had masculine, feminine and neuter forms. The pronouns were postfixed in a contracted form to the verb. The substantives had, to some extent, generic postfixes, and this, combined with the euphonic variations of the case postfixes, produced different declensions. In general, however, pure flexions did not exist, the postfixed particles (pronouns, possessives, definitives, directives &c.) being separable from the roots, and the different dialects exhibiting a considerable degree of freedom in their choice of some serviles and in other respects.

This formation still prevails with little modification, though with considerable variation, from the plain of the Ganges to the southern extremity of India, including Ceylon. It enters into the Gangetic formation, some of its distinctive traits being found not only in the languages of the plain but in those of the hill tribes around Assam. Fainter traces are found in the Tibetanised Himalayan languages; and even the highly Arianised languages of the pure and mixed Arian races—Bengali, Hindi, Guzerati &c.—preserve Dravirian forms. It may be concluded, therefore, that the race and its linguistic formation preceded the Ultraindian, Tibetan and Arian in India, and prevailed everywhere to the southward of the Himalayas.*

But we cannot stop at this result, for the very fact of the Dravirian race having been able to spread itself over all India, implies that it was in exclusive occupation of the region during a prolonged era, and that, in the earlier ages at least of this era, cognate tribes were spread over the adjacent lands to the N.W. or N.E., or in both directions. If the Dravirian stock came from the N.W., it must have been an offshoot from a parent race located beyond India in that direction, and if it found India without prior occupants, or possessed by tribes so feeble that it succeeded in everywhere destroying or absorbing them, it is probable that the adjacent lands on the N. E.,—which are not separated from India by any great ethnic barrier like the Himalayas,—were also unoccupied or possessed by similar inferior tribes, and that the Dravirians, consequently, spread from the Gangetic valley along and over the Assam range into Ultraindia, as well as over the Vindyan range into the Dekhan. If they came from the N. E., similar reasoning would apply with reference to a N. W. extension. But the distribution of the races and languages of the Continent renders it certain, or in the highest degree probable, that the Dravirians did not enter India from the N. E. but from the N.W. The eastern Indian basin (that of the Bay of Bengal) is bordered

* Here I mean the race and language as we find them, allowing for the influences of the intrusive races. The remoter history of the formation may prove that the proper Dravirian character was bestowed by a still older intrusive people, Scythico-Semitic and pastoral, who found India less Scythic and more African than it became under their influence.

on the north and east by the mountainous region occupied by the Tibeto-Chinese hordes whose physical type is not Dravirian, and who preserve languages of a much more archaic character, and differing so widely in phonetic development from the Dravirian as to render it clear that the latter was derived from some remote region lying in a different direction. On the N. W. the races that, from time immemorial, have occupied the region between the Indus and the Euphrates, are Turanian, Iranian and Semitic. The affinities between the Iranian and Semitic races and languages and the Dravirian shew a certain degree of archaic connection, but the contrasts are so great as to amount to proof that the latter could not have been exclusively derived from the former. A comparison with the Turanians leads to a different result. Physically the Dravirians are somewhat Turanian, but the various Turanian races in Asia and America have a much stronger resemblance to each other than to the Dravirians. The latter have peculiar traits which prevent us from recognizing their stock in any of the Turanian races of Asia. On the other hand, the Dravirian linguistic formation, as we shall find, has an affinity so strong and unequivocal to the great Asiatic Turanian, or Ugro-Japanese alliance, that it must be considered as being, to a great extent, a member of it. If we looked to language alone, we might be disposed to rest satisfied with the conclusion that an archaic Turanian formation preceded the Arian and Semitic in Irania and spread thence into India. But here, also, the mere fact of finding a Scythic linguistic formation associated with the oldest Indian race—and leading to the inference that the intrusion of the Iranian and Semitic tribes into the southern portion of the Scythic linguistic province is a comparatively recent event—impresses us with a conviction that great changes must have taken place in the relative position and power of the western Asiatic races. The Turanian formation, physical and linguistic, evidently long preceded the Iranian and Semitic as an expansive and dominant one. Whatever may be the respective origins and ages of these formations, it is certain that the Turanian was migratory and diffusive on a great scale long before the Semitic and Iranian ceased to be comparatively fixed and secluded. During the great lapse of time that was necessary to enable the Turanian linguistic formation to spread to Lapland and Japan, to North Cape and Ceylon, the cognate Semitic and Iranian stocks must have remained sequestered in some portions of the mountainous band of Asia minor, Armenia and Irania and the adjacent S. W. region, which includes the basin of the Euphrates, or must have directed their diffusive energy mainly towards Africa. The advance of the Arabs into Southern Arabia is a historical event. The archaic history of the purer or proper Iranian and Semitic races, so far as it is known or can be surmised with any degree of probability,

does not forbid our seeking to trace the Turanian linguistic formation and the Dravirian stock to the S. W. along the northern shore of the Indian Ocean. The interval between the mouth of the Indus and the nearest point of the African region—Socotra and the projecting land of the Saumali and Suahili—is not wide, and as the African race is evidently the aboriginal, and the Arabic the intrusive, one, on the western side of the Red Sea, it may be assumed that a period existed in African history when the Arabs had not yet advanced so far to the southward and westward as to come in contact with the African race. Southern Arabia and the adjacent southern seaboard of Persia may have been occupied in earlier eras by tribes and languages connecting the Turanian with the Indian, on the one side, and with the African, on the other. At all events, there is no reason why we should not seek in the direction of Africa for facts that may reconcile the linguistic agreement with the physical discordance of the Dravirian and Scythic formations.

A glance at the variable physical character of the African tribes shews that the peculiarities in the Dravirian physical type, when compared with the Scythic, are African and Africo-Semitic. The very exaggerated occipital and maxillary projections are not characteristic of the typical African head, but of a debasement of it confined to certain localities. Several East and Mid-African nations have the so-called African traits much softened and differ little from the Dravirian. Even woolly or spiral hair is not universal, some tribes having fine silky hair. The Dravirian pyramidal nose, the sharp depression at its root, the slight maxillary and occipital projection, the turgid lips, the oval contour, and the beard, are all African.

The main affinities of the Dravirian formation thus point two ways, the linguistic chiefly to a Scythic, and the physical chiefly to an African, origin or fraternity. The geographical position of the Brahui would lead us to explain the double alliance by placing the native land of the Dravirian stock in Beluchistan, and including it with Arabia—or the southern portion of the latter—in the archaic African or Africo-Semitic era. But if the ultimate basis of the Indian formation was allied to the African, and the African physical element still prevails over the Scythic, it may be contended that is improbable a Scythic language should have entirely superseded one of an African character. In reality however the Scythic races and languages, as we shall find, have in themselves an intimate archaic connection with the African, and the Dravirian language, although Scythic more than African, has special Africo-Semitic affinities.

If the ancient Indian formation were simply an offshoot from one of the branches of the Scythic stem, our linguistic enquiries might properly cease when we arrived at such a conclusion. But

as the Dravirian languages have wider relations, it is necessary to examine not only the Scythic and Africo-Semitic formations but all the other pre-Iranian developments that can throw light on the archaic history or connections of the earliest known formation of India. The following short notices of the Fino-Japanese, Caucasian, Africo-Semitic, Euskarian and American alliances will lead to a more definite impression of the position not only of Dravirian, but of the Tibeto-Ultraindian and Chino-Ultraindian families. The general phonetic and ideologic characters only will be considered. The glossarial affinities between the former alliances and the Indian and Ultraindian will be separately adverted to in the glossarial sections.

Sec. 2. GENERAL CHARACTERS OF THE SCYTHIC OR FINO-JAPANESE LANGUAGES.*

We have not yet the means of comparing the phonologies of the numerous dialects spoken in the wide region embraced by the Ugro-Japanese formation. The principal languages, from the Fin and Hungarian in the west to the Japanese in the east, have many phonetic characters in common, particularly that of vocalic harmony. This character, so remarkable from its great extension, makes itself felt in these languages not only in a vocalic homophony or harmony in the syllables of those radicals which have assumed final vowels, but in the euphonic transformation of the vowels in the postfixed particles. Vowels are euphonicly ranged in 3 classes,—the hard, soft and medial. The hard harmonise with each other and with the medials; the soft with each other and with the medials, vowels that do not harmonise cannot occur in the same word.† In Turkish, consonants are

* Abel-Remusat, "*Recherches sur les langues Tartares*"; Klapproth, "*As. Pol.*"; Adelung and Vater, "*Mithridates*"; Prichard, "*Researches*" &c.; Fr. Siebold, "*Epitome linguarum Japonicarum*" (*Verhandelingen v. h. Bataviaasch Genootschap*, XI Deel, 65); Rodriguez, "*Elemens de la Grammaire Japonaise*" (by Landresse, Abel-Remusat, and appendix by W. V. Humboldt); Gabelentz, "*Elemens de la Grammaire mandchoue*"; Amyot by Langles, "*Dictionnaire Tartare-Mantchou, Francois*"; Schmidt, "*Grammatik der Mongolischen Sprache*"; Gabelentz, "*Ueber die Samojedische Sprache*," *Zeitschrift d. Deutschen Morgenl. Gesellsch.* 1851 p. 38 &c.; Viguier, "*Elemens de la langue Turque*"; Davids, "*Grammaire Turke*"; Kellegren, "*Die Grundzüge der Finnischen Sprache*" &c.; Moritz Ballage, "*Grammatik der Ungarischen Sprache*."

† In Fin the vowels form 3 classes,—the hard, *a, o, u*; the soft *ä, ö, y*; and the medial, *e, i*. The euphonic laws are thus circumstantially defined by Kellegren:—Hard and soft vowels cannot occur in the same word &c., that is, they do not harmonise. But hard vowels harmonise with hard and with medial, and these may therefore occur in the same word. So soft vowels harmonise with soft and with medials. When the stem-vowel is hard so is that of the postfix; when the stem-vowel is soft, so is that of the postfix; when the stem has both a hard and a medial vowel, the postfix has a hard one; when the stem has a soft medial vowel, that of the postfix is soft; when the vowel of the stem is medial, that of the postfix is soft. The classification is applicable, with few variations, to the other languages of the alliance.

subjected to a similar euphonic law, and its influence on consonants is slightly felt in Mongol also. The Fino-Japanese languages affect sibilants like the Chinese, Burmah, Tibetan and archaic Indian, and some have harsh and complex consonantal sounds like certain of the latter. *Ts, ds, dx, st, sh, ks, tch, sh, tsh*, are common. So also are strongly aspirated gutturals. The vibratory liquid, *r*, is much affected in Mongolian and Korian, and the pure liquid, *l*, by the Manchu and Turkish. The consonantal finals are liquids and nasals chiefly. The tendency to liquids is a Dravirian trait. *K* and *t* are also common finals. Japanese adds the labials *f, b, m*, and Korian has *p*. None of these languages are purely vocalic or nearly so, like the Telugu, but consonants are rarely joined, and the Japanese and Fin have a high degree of vocalicism. Manchu and Mongol have also a strong vocalic tendency. The euphonic propensity is stronger in all the Scythic than in the Indian tongues.

The phonetic structure of the formation is based on a rhythmical dissyllable, the accent being on the first syllable.* Beneath this basis the traces of a more archaic formation may be detected. The ultimate roots are monosyllables, and dissyllables have been formed by phonetically expanding the root, by reduplication, by uniting definitives and other particles to roots, and by compounding roots. The dissyllables may also be themselves compounded, but in this respect the power of the different languages of the alliance varies greatly. The formation in one of its older stages—or rather that parent formation from which the harmonic character was derived—appears to have been highly agglomerative, somewhat agglutinative, and more akin to the Iberian and American. But this phonetic freedom and luxuriance has been much diminished, especially in the proper Tatar family. In each of the Fino-Japanese languages the monosyllabic root is preserved in its integrity, or with only such dialectic variations as are incident to all linguistic groups. It suffers no change from inversion or incorporation and very little from ellipsis. The modification which the final consonant sometimes undergoes from the influence of a postfix is usually only a slight euphonic one, as the substitution of a sonant for a surd, or the suppression of the second of two conjoined consonants. This crude phonology of the root strongly connects the Scythic languages with the Tibeto-Ultraindian and even with the adjacent purely crude and monosyllabic group, while it broadly distinguishes them from all the other surrounding formations—American, Iranian, Semitic and Cau-

* In Fin, and probably in most other members of the Fino-Japanese alliance, the root or first syllable never loses its full accent. When the word is rendered polysyllabic by postfixal additions the 3rd and subsequent odd syllables receive a subordinate accent. In Turkish the accent falls on the last or on the penultimate syllable, independently of the root.

casian—the latter, however, having some members more crude and Scythic than others.

It thus appears that the principal phonetic characters of the Scythic formation consist in vocalic harmony: a strong tendency to aspirates, sibilants and liquids; monosyllabic roots nearly immutable; and a dissyllabic structure of vocables accompanied by trochaic rhythm. In all these characters it presents a parallel to certain African and Asonesian formations and to Dravirian. But vocalic harmony is less fully carried out in India and Asonesia, and the Dravirian phonology has some peculiarities.*

The structural processes of the Fino-Japanese languages are similar to the ancient Indian. But the concord of the vowel of the postfix with that of the root is more regularly observed.

Words are crudes. There are no particles of gender. A separate definitive article, *az*, occurs in the Magyar only, but the other languages have concreted definitive prefixes and postfixes, generally the latter. Some of the living postfixes which distinguish the substantive from other forms and modify the substantival applications of the same root, may also be considered as definitives. These substantival postfixes are very numerous. Thus in Manchu *ngga*; *lan*, *len* or *len*; *khen*, *khon*, *gan*, *gon*, *kan* or *ken*; *ri*; and the compounds *khi-yan* and *li-yan* or *li-yen* are used both for substantives and qualitatives, and *ku*, *ko*; *fun*, *sun*, *tchun*, *tchon* and *n* for substantives only. The following remarks

* I add some notices of the phonology of that branch of the Scythic alliance which, in the historical era, has been geographically nearest Tibet, India and Ultramidia,—the Tatar.

The Manchu is highly vocalic, and words entirely homophonic in their vowels, as in the Japanese and many Asonesian and African languages, appear to be frequent (e. g. *araka*, *sarapa*, *angara*, *falga*, *eme*, *ele*, *golo*). At the same time it acquires a harsh character from the strong sibilant, aspirated and guttural sounds which characterise it like all the other Tatar languages, such as guttural *gh*, *tch*, *ks*, *th*. (1) Amongst the final consonants *n* appears to be the most common but this is owing to its being a definitive postfix; *k*, *r*, *s*, *ng*, *b* also occur and more rarely *m* and *t*. On comparing Manchu with the other Tatar languages we remark that it frequently drops the postfixual *n* and that, like the Turkish, it often changes *r* into *l*.

The Mongol is sonant and sonorous. It is very vocalic. It has all the consonantal finals of the Tungusian save *ng* and it adds *l*. The combinations belong to the same class. The most common are *tch*, *dek*; *ts*, *dz*; *sh*, *tsh*; *kh*. It is distinguished from the Turkish by its vibratory character, *r* being one of the most common sounds. Like the Turkish it changes *k* into *gh*, the soft *k* into *g* and *y*. It appears to be less vocalic in its terminals than the Tungusian.

The Turkish has the same general character. The sibilants and sibilio-aspirates with the aspirate *dj*, *tch*, appear to affect the phonology considerably and detract from the softness which its vocalic tendency would otherwise confer. These sibilant and aspirate sounds occur frequently. On comparing the Turkish with the Mongolian and Tungusian it exhibits a disposition to replace *r* by the sonant sibilant *x*, (as in some of the South African languages), the hard *k* by the sonant aspirate *gh*, the soft *k* by *g* and *y*, to drop final *k*, to avoid initial *n* (by eliding it or changing it to *y* or *dj*) and initial aspirates and surds. All these changes are referable to a sonant pronunciation, with a tendency to aspirates. Under the latter influence it also changes all other initial labials into *f* and *v*.

(1) Mr Taylor Meadows in his essay on the Manchu, says that it is "a harsh sounding language"—Gabelenta that it is "sweet and harmonious." It is a harmonic and vocalic language with some harsh consonants.

on Scythic prefixed and postfixed definitives are founded on a comparison of the vocabularies in Klaproth's *Asia Polyglotta* and *Sprach-Atlas*. Some roots, it should be observed, have both a definitive prefix and postfix and even two postfixes,—a phenomenon found in all crude and non-tonic formations and on which I have already remarked. (Chap. IV.)

A prefixual *a* (sometimes *u*) occurs frequently in most of the groups, including Japanese at the one extremity and Fin at the other. As the Hungarian *az* is preplaced and is contracted to *a* before consonants, it is probably the same particle. It must be remarked, however, that all the vowels occur prefixually and apparently definitively in many cases, as in Ultraiidian, Dravirian, African and Asonesian languages, and that in the Turanian, as in these groups, they can sometimes be distinctly traced to other prefixes. As the vowel of each definitive, prefixed or postfixed, is variable euphonically with that of the root, it is obvious that any definitive may, by elision of the consonant, produce all the vocalic prefixes. *Az* is the almost universal definitive *as*, *sa*, *s*, *h*, which frequently passes into the equally common *tha*, *ta*, *t*, *ha*, *h*, &c. In the Scythic languages it is generally used for the plural. Thus in Manchu *e-re* "this", *e-se* "these"; *te-re* "that" * *te-se* "those"; *i* "he" &c., *che* "they". The Scythic plural postfix is derived from it,—Manchu *sa*, *se*, *si*, *ta*, *te*; † Mongol, *d*, *od*, *s*; Fin *t*; Hungarian *k*. But *s*, *z*, *t*, (*d*, more rarely *sh*, *ch* *y*) also occurs, with or without vowels, as a concreated postfixed definitive in most of the Scythic, as in the Indo-European, vocabularies. In some of the Ugrian it is nasalised into *nta*, *nda*, as in some African languages. In like manner the labial *b* takes the nasalised African form *mb*. *Sa*, *se*, *za* &c. occurs as a prefix in Ugrian, Mongol, and in a few words in Tungusian.

Many roots occur with prefixual *s*, *t*, *d*, *ch*, *y* in some languages and without them in others. For example a wide spread root for "air", "wind", "sky" &c. is the liquid *l*, *r*, with different vowels, and sometimes with a nasal final in languages which affect that final. In Yukahiri we find the pure root *ili*, in Turkish *il*, in Fin the euphonically reduplicated form *lil* (comp. Semitic, Iranian, African, Asonesian *ire*, *aer*, *ira*, *iri*, Burmese &c. *li*, *le*). In Fin it takes the postf. *ma*, *m* (*ilma*, *ilm.*) But in Ugrian and Turkish dialects we also find *til*, *tol*, *tul*, *dil*, *chil*, *sil*, &c.

The most common concreated postfix is *n*, sometimes vocalised *na*, *ni*. In Manchu it is dropped when the plural particle is used, so that it is not completely concreated in the Tungusian branch. It is found as an element in the Japanese demonstrative *ko-no* "this" (comp. *ko-re* "that"). In the same full form it occurs as a defi-

* *Re*, which appears in these forms as a definitive, is also used as a plural postfix, *ri*,—but here the *i* is probably the plural element as it is a plural particle in Fin. *Re* is also Japanese *a-re* "lie", *ko-re* "that" &c.

† *T'e* occurs as a definition in *te-re*, *te-se*,—"that, those."

nitive postfix in Caucasian vocabularies (*na, no*). In other formations it is a common definitive, prefixed or postfixed. It is connected with the prevalent forms in *l, r*, such as the preceding *er*. In Samoide *ra, la*, occurs as a postfix, corresponding with the Caucasian, Semitic, African and Dravirian *al, ar, el, la, ra, &c.* Ostiak has *al, el* and also *tl*, which is Caucasian and American (Lesgian *tlī, tl*). Yneseian, like the Tatar languages, occasionally postfixes *ri, rin &c.* In Koriak *l* occurs both as a postfix and prefix. In the more western vocabularies also *na, la, il &c.* occasionally occurs as a prefix chiefly in the form *la*. It is also Mongolian (*no, na, un, om*). In Tungusian it is very rare, but *al, ra* are found in a few words. *No*—occurs in Aino.

The guttural postfix (connected with the dental) is not common in the Scythic languages, but examples occur in many of the vocabularies. In Japanese it is prevalent as an agentive postfix *ga*. In Samoide, *ke, go, ga* occur; in Manchu *hke, ga &c.*; in Mongol and Turkish *k*. The Caucasian postfixual *gu, go*, and the Dravirian *ka, kha, khe, ga, gu*, is the same particle. One of the Manchu substantival formatives (postfixed) is *kan, ken, gan, gon, khon, khi*, which is the common *ka, ga*, either simply nasalised or compounded with the definitive *n*. The same postfix is found in Koriak and Kamschatkan substantives (*ga, gan, gun, gin*). Eskimo has *ka, ak, ga*. As a prefix *go* and *ta* occur, but very rarely, in Tungusian. Mongolian has *go, ge, gan, han, chan*, and *do, ta, to &c.* Yneseian has *ta, da, do, tan, di, gi, li, ku, ke &c.* prefixed or postfixed. Prefixes are much more frequent in this group than in the Tatar. Prefixual *g* is found in Aino.

The labial definitive *m, b, v &c.* (with and without vowels) occurs as a separate particle in Japanese (*wa*, agentive &c.) In the Ugrian dialects it is a common definitive postfix (apparently concreted). In the Caucasian vocabularies it takes the forms *wa, ba &c.*, in the Ugrian *ma, vi, va &c.* The same particle is a Dravirian and Indo-European substantival or definitive postfix.

The Scythic languages, as a whole, appear, in their earlier form, to have embraced the entire range of simple definitives. In this respect they resemble the Tibetan, Ultraindian, Dravirian, Caucasian, South African and Asoncsian systems. The S. African has the prefixes *si, zi &c.*; *ku, go &c.*; *mu, mo, ma, ba &c.*; and *lu, lo, li &c.* Other African languages have the forms *ta, na, wa &c.* The Iranian range of definitive postfixes, as preserved in the nominative case endings, embraces only a portion of the Scythic, Caucasian and Dravirian—*am, ma, n &c.*; *s, r* and the vowels, but others are probably preserved in a concreted state.*

The relational particles, or those of possession, direction &c.

* The following examples will illustrate the extent to which postfixes prevail, and the same roots are diffused, throughout the various families of the Turanian formation. They also shew the influence of the phonetic action of the definitives in varying and disguising the monosyllabic roots :—

corresponding to case-endings and prepositions,—are postfixed or postplaced. They are numerous, and nice distinctions are indicated by them. The Ugro-Fin group has agentive,* assertive or predicative, factive or mutative, mediative or instrumental, partitive (objective or subjective),† penetrative or illative, ("into"), ablative or ex-transitive ("from"), allative or ad-transitive ("to"), elative ("out of"), essive, inessive ("in"), adessive, ("at," &c.), privative or caritive, negative, comitative, prosecutive, temporal, possessive and other postfixes, simple or compound. The more generic relational postfixes and postpositions maintain a glossorial identity or strong resemblance throughout most of the languages of the Fino-Japanese alliance. But, as in other formations and even in dialectic groups, the same particle is sometimes variously applied in different languages.

Substantives are indefinite as to number. Plural postfixes are generally used, and, as in other formations, they precede the relational postfixes. Qualitives, although often having a defini-

High.

a. Ugro-Fin:—*wylyn*, *wylm*, *molín*, *molint*, *morshe*, *mely*, *pylna*, *pylyp*, *palap*, *pyrgi*, *pil*; Samoiede:—*pirritsche*, *plrzi*, *pize*, *pyrro*, *furrega*, *pirga*, *pyrgek*, *pirrik*, *pyrsha*, *pyrze*, *purgi*; Yenesian:—*bartschoi*; Turkish *besik*. *biik*; Korea:—*nóphur*, *nopen*; Koriak:—*níwlichin*.

b. Ugro-Fin:—*kirg*, *kirya*, *koräna*, *korge*, *korgie*, *koris*, *kyrris*, *ugor*, *ogur*, *hogor*; Samoiede:—*huri*, *arka*; Turk:—*ulpen*; Yenesian:—*tokurdu*; Tungusian:—*ugilya*; Koriak:—*nighinnegilyuchen*, *nytygylgynochen* (reduplicated forms); Kamachatika:—*yugulaha*, *kranala*. [This root is probably an archaic variety of the preceding one, (a.)—*k*, *g*, graduating into the labials through the aspirate *h*.]

c. Ug. F:—*numan*; Samoiede:—*nambo*.

d. Ug. F:—*tonaan*, *totzhi*, *tuntsche*, *tunsit*; Yenesian:—*tynyylsha*; Mongol:—*ondur*, *undur*, *utu*; Tungus:—*dan*, *gu-dan*, *guk-da*; Yukahiri:—*pudannai*, *pudannia*, *buden-banit*; Japan:—*taka-si*.

e. U. F:—*sarie*, *syeri*, *zhizhit*; Yenesi:—*etschaga*, *shyampfu*, Turkish:—*sule*, *usul*; Aino:—*sororu*; Kamel:—*dashelu*, *nashlaký*, *dasheln* ("hill" *izhulgan*, "mountain," *enzhalchen*); Koriak:—*mountain*, *challelligin*.

f. U. F:—*kuksha*, *kuksh*, *kush*; Tungus:—*guk-da*, *gog-da* [probably connected with *b*]. The common Turkish root is identified with *kuk* through the Turkish power of substituting initial *y* for *k* and the interchange of *y*, *s* and *d*. The Turkish varieties of this root are *bi-yok*, *yok-sek*, *byo-suk*, *be-sik*, *bu-yuk*, *ur-duk*, *di-ik* &c.

Stons.

U. F:—*ku*, *ko*, *to*, *kiwi*, *kalle*, *koch*; Yenesi:—*kit*, *khes*, *tyes*; Turk:—*tas*, *dash*, *tazh*.

Water.

a. Samoiede:—*tui*, *itu*, *yth* &c.; Turk:—*su*, *so*, *sug*, *shiuca*, *shiu* &c.; Mong:—*usu*, *usun*, *usun* (probably from *sugun*); Japan:—*mi-dzu*, *mi-za*, *Kamch*:—*asa-muh*; Yukahiri:—*ushe*, *undsche*; U. F:—*wit*, *uit*, *ute*, *tsesi*, *tatse*, *vis*.

b. Tungus:—*mu*, *muke*, *maya*; Korea:—*mu*, *mul*, *bul*, *mel*, *mur*; Koriak:—*mimel*, *mima*, *minai*, *mimipil*; Kamch:—*asa-muh*; Chukchi:—*mok*, *emak*, *mok*; Aino:—*waka*, *wacha*, *wazka*. [The root is probably connected with the labial of the Ugro-Fin *wit* &c. whence many wide spread terms for "water," "wet" &c. including the English. *Wa*, *wu*, occurs by itself in the Peruvian dialect of U. F.]

* In Fin the final consonant or definitive undergoes a euphonic change when the word is used agentively.

† The use of the same particle as subjective and objective is also a Dravirian trait.

tive or possessive postfix, do not, save in Fin, take the case and number postfixes of the substantive which they qualify.

The verb is crude or radically substantival as in Dravirian. Action formatives are postfixed, their vowel being regulated by that of the root, which is found bare in the imperative. The formatives are numerous and combinable, as in other formative and agglomerative languages (Dravirian, Euskarian, African, Malagasi-Aonesian &c.) E. G. causative, intensive, potential, frequentative and continuative, inceptive or inchoative, denominative, negative, reflective, reciprocal, desiderative &c. Some of the more simple and generic of these formatives are identical with those of the substantives. The eastern Tatar languages do not use the auxiliary verb of being (and possession) to form complex tenses, as the Tibetan does in forming the post-retrospective. The Western or Osmanli Turkish avails of the verb substantive in its tenses. The proper temporal postfixes merely indicate the present and the past. The Ouigour and Mongol appear from Remusat's notices, to be very deficient in formatives expressing the relations of action. But as these occur in Ugrian, Osmanli, Manchu and Japanese, it is probable they will be found in the other Tatar languages also.* As in the Tibetan and Dravirian, the action is expressed most frequently through a substantive form (which takes directive postfixes like other substantives). Six or even ten forms of the gerund are used, and in books the sense is sometimes suspended by them for one or two pages, when the verb at the end of the sentence suddenly explains it.† The collocation is inverse. The subordinate precede the principal terms, and with a degree of rigid uniformity which is not found even in the Chinese. The numeral, the qualitative and the possessive words precede the substantive: the words modifying the action precede the verb or action word. Directives are postfixed or postplaced. The verbal postfixes follow each other in this order: 1st the species of action,—causative, inchoative, intensive, frequentative, diminutive &c; 2nd, the form,—transitive, (active or passive) or intransitive; 3rd, the mode; 4th, the personal pronoun in a contracted form. In Mongol, Manchu and Japanese the personal postfixes are wanting. The agent is followed by the object and the object by the action.‡

The pronominal system is not very elaborate save in the Ugrian

* Schmidt's Mongolian grammar, which I had not procured when the above was written, shews that Mongol has several verbal formatives, such as transitive and intransitive, passive, causative and co-operative. Eight moods may be expressed.

† *Journal Asiatique*. X. 346, Review of Mr Redhouse's Grammar. In the elaborate literature of the Osmanlis this produces a highly artificial style. "With them a long period imperfectly sustained by the frequent return of the gerund or participle often conducts the reader to the end of a page, without offering him the verb on which the sense of the whole sentence depends." *Remusat*.

‡ In the Turkish, "in all propositions the circumstances of time are placed first, next those of place, then the nature of the action is indicated, next the object of the action, and finally the verb." *Journal Asiatique* ubi sup. Incidental propositions precede the chief, clauses dependent on a relative precede it. "That which

languages. The plural of the 1st person has absolute and relative forms in several languages. In some the possessive pronoun is pleonastically postfixed to the substantive, as well as preplaced.

The western Ugro-Tartarian languages are more developed than the eastern. The Mongol is the most simple. The ruder Turkish or Ouigour, and the Manchu are intermediate. The western Turkish is much more elaborated, but its basis is simple compared with that of the Fino-Ugrian languages, which are distinguished by their complex formative system and the greater development of their general ideology.

Some particles and formatives may be glossarially traced in all or most of the Ugro-Japanese languages, but others are peculiar to each language, a remark which applies to every crude formation and even to groups of mere dialects. The cause has already been indicated. The vocabularies at large shew a considerable community of roots, but the greater portion of each appears to be peculiar. Each has also special affinities with non-Scythic languages,—Caucasian, African, Tibeto-UltraIndian, Asonesian &c.

Dr Prichard has entered, at unusual length, into the relations between the principal Tatar groups but has passed over the Japanese with very slight notice. I will therefore advert to it specially, in order to shew that it is a member of the Ugro-Tatar formation; and as it is most closely related to the Manchu, I will subjoin some remarks on the latter. I will also briefly advert to the Korian and the Ugrian.

The ethnic importance of the Japanese, from its position with reference to the American, N. E. Asiatic; Tungusian, Korian, Chinese and Asonesian languages, and the circumstance of English ethnologists not having yet directed attention to it, require a somewhat fuller notice of its characteristics than would otherwise be necessary for the purposes of this paper.

It may be most generally described as an ideologically crude, and phonetically very harmonic and sonant member of the Scythic division of the great postpositional system of languages which extends from North Cape to Cape Horn. It abounds in particles, which are postfixed like the directives, and modify or add to the meaning of the principal word. Its collocation is the same as in the Ugrian, Tatar, Dravirian &c, and the participle is the dominant ideologic power, as in them. The glossary is very objective and concrete, most of the abstract words, which the later civilisation of the race has required, being derived from Chinese. It possesses the same harmonic phonology as the E. Indonesian, the Telugu, the Malagasi and many other African languages. The entire language, which is very rich, is composed of 70 or 72 sounds, all of which are vocalised consonants, with the exception of those

governs is always placed *after* that which is governed. Compound words, nouns in relation, particles, incidental phrases. all are submitted to the same rule." *Remusat*.

which end in *n*. The only approach to a junction of consonants is in the sibilant forms of *k*, *t*, *d* (*sk*, *ts*, *ds* or *dz*).^{*} It is polysyllabic, abounds in compounds, and is highly euphonic, vocalic harmony being fully developed. Vocalic aliteration is a marked feature, and is carried further than in the Indonesian and Polynesian languages, so as to impart to it a somewhat monotonous aspect. In its general rhythmical character and its addiction to vocalic harmony and to sonants, it has a remarkable resemblance to the E. African, the Malagasi and some of the Celebesian languages,[†] although the occurrence of the Tatar sibilant dentals and gutturals renders it less soft. In speaking, the final vowel is frequently omitted, but this, apparently, in those cases chiefly in which one of the meeting consonants is a semivowel. To this however there are exceptions, and it appears in rapid speech to approximate to the elliptic and consonantal character of many of the American languages. On the whole, the Japanese phonology must be regarded as highly important. It has characters in common with the N. E. Asiatic and with the American formations,

^{*} Chinese Repository vi, p. 111 (? Williams). Meylan, however, says that some of the letters cannot be articulated save by natives. Fisher says "The first personal pronoun *watakusi* is contracted into *watakfs*." Upon this combination of *kfs*, which occurs frequently in Dr Medhurst's vocabulary, derived, it may be presumed, from the Dutch writers, Mr Williams remarks "The contraction *watakfs* is probably written by the Dutch to express a kind of aspirated clipping of the word, for there is no *f* sounded by those whom we have seen from other provinces, nor is it thus written in Rodriguez' Grammar."—Siebold, however, tells us that the terminal *ka* and *ki* are not rarely pronounced *kf*. In addition to final *n* the following finals occur in Medhurst's vocabulary,—*k*, *t*, *ts*, *r*, *s*, *f*, *b*, *m*; the *r* most often, *k*, *t*, *b*, very rarely. In this vocabulary *n* itself seldom occurs as a final, save in the vocalised state, *ni*, *ne*, and in one or two instances, *na*, *no*. The other consonantal terminals are, in most cases, marked as contractions by the apostrophe. By far the greater number of the words are vocalic. The vowel *i* is omitted in several cases enumerated by Dr Siebold. Thus in *ki*, *si*, *tsi*, &c followed by *ya* or *yo*, the *i* is elided, *tsiya* is pronounced *ts'ya*. Final *u* and *i* are seldom sounded, *misu* becomes *mis*, *mitsi*, *mits*. *Tsu* is omitted in the middle of words. None of the action roots terminate in consonants (Humboldt.)

[†] The following stanza is given in the "Manners and Customs of the Japanese" p. 305 (A) and in the transactions of the American Ethnological Society, vol. ii. p. 145 (B) from Dutch writers. Unfortunately the translation gives no aid in comparing the two forms. A is quite Bugis in rhythm, B the form which Bugis would assume if it were broken up by separating particles and roots, so as to display the language in its elements.

A

Kokorodani makotono
Michini kanai naba
Inorazu tatemo kamiya
Mamorau

B

Kokoro da ni makoto
No mitri ni kana fi naba
I no ra tsu to te mokami
Yama mo ranu

The following is from Rodriguez.

Aware tada uki toki zururu tomono gana!

Fitono nasakew ayoni arisi fodo?

"Oh, who will bear me company in misfortune

Why does human love only shew itself when we are happy?"

and it represents a harmonic, agglutinative and elliptic condition of the Tatar formation, having, like Ugrian, stronger affinities both to American and to Mid and South African phonologies than the present Tatar languages.

It does not, like the American, throw off whole syllables, and the stable remnants are not euphonically protean in the same degree. Its compounds rather resemble the African and Australian.* Being postpositional like the latter, it presents many close analogies to it. The action word does not phonetically involve or reflect the pronoun, but it produces euphonic variations in the postfixed time particles, giving rise to so called conjugations as in Tatar, Australian, Tamulian, &c. All words are crudes or names of substances, attributes &c. which by the aid of numerous servile particles, of the same character as those which abound in all the kindred languages of Europe, Asia, Africa and America, undergo various modifications. There are substantive, personal agentive, objective, abstractive, qualitative, verbal, (affirmative and negative) causative, diminutive, emphatic and many other postfixes, as in all other postfixual languages. Humboldt has drawn attention to the substantive character of the verbs, as exhibited in the expression of the persons, e. g. *wagano aguru*, "I offer," literally "I—of offer," "my offer," *no* being the possessive particle.† Even conjunctions and prepositions take postfixual particles and are therefore declinable in the same sense in which the American words are.‡ The simple fact is that in all languages of this class any relation or modification of an action can be expressed by a succession of crudes, as in the Chinese, and that these crudes can be euphonically agglutinated, the more common ones being invariably so. Dissyllabic words are pluralized by reduplication, accompanied sometimes by an euphonic change

* But the Mexican compounds are generally short. The Bugis and allied African aggregates have the nearest resemblance to the Japanese, and it would be closer still if the latter did not throw off vowels. The great number of alliterative words appears to show that a large proportion of the dissyllables are euphonic and ideologic expansions of the earlier monosyllables. This would be a sufficient reason for their retaining both syllables in aggregates. In the national mind the euphonic dissyllable is the only representative of the idea. In the American mind the monosyllabic root still represents the idea. To cut off a syllable in the one language is to destroy the word, while in the other it merely separates the root from a servile. In compounds, the possessive particle is sometimes ejected, e. g. *kawano gutai* "mouth of river" becomes *kawa-gutai*.

† This reminds us of the Naga optative.

‡ Mr Williams gives the following examples.

<i>Sta</i> , the preposition "below"	<i>stawa</i> , the substantive "lowness."
<i>Stano</i> , the adjective "low"	<i>stani</i> or <i>staye</i> , the adverb "below."
<i>Stanisheru</i> , "to make low"	<i>staninarnu</i> , "to become low."

This only shews that the terms adjective, adverb &c. are totally inapplicable grammatically to languages which are crude and merely aggregative or agglutinative and not abstract and inflectional. We may use them as logical terms but not otherwise. It is clear that there is only one word *sta* expressing the idea of lowness and that it is a crude. The postfix *ta* is a definite particle, *no* is the possessive particle, *ni* the transitive directive &c.

of the consonant, e. g. *fito*, *fitobito*; *fera*, *feradera*.* As in the Mexican, every substantive may take four postfixes (plural in Japanese) which express different degrees of respect and contempt. The honorific postfix is *iatsi* in Japanese and *tzin*, *tzintli*, in Mexican (*tli* is the definitive in Mexican, and *tzin* appears to be a nasal form of the Japanese *tzi*). The Japanese express a lower degree of respect by *-su*. *Domo* is used by them in addressing inferiors. The Mexican uses *ton*, *tontli* (apparently the Japanese root) as an assertive of superiority or in expressing contempt; *-pol* to denote excess (generally bad); *-pil* diminution and affection. The Japanese use *-ra* as a humiliating, i. e. in addressing another. There are other particles used honorifically for the second and third persons (*uye*, *mi*, *won*, *go*, *som*, *hi*, *sama*, *ghio*, &c). The pronouns also have different forms of this kind, as in the S.E. Asian (Chinese, Tibetan, Ultraindian) and many Asonesian languages, and, in a less degree, in most other formations. Verbs also have honorific and humiliating postfixes.

The pronominal plurals are formed like those of substantives, but the plural words are more varied. 1st, *watak* P. *wataks* *domo*; ware, P. *warera*. 2nd, *anata* or *sonata*, P. *anagata*; *omae*, P. *omaegata*. 3rd, *kare*, P. *karera*; *anohito*, P. *anohito-tats*. *Ra* is a very widely spread plural particle. The possessive and directive postfixes are the same as those for substantives. Qualitives are formed from merely substantive names by the possessive postfix *no* (sometimes the generic definitive *ga*). There is a class of particles or verbal nouns which terminate in *ai*, *ei*, *ii*, *ui*, *oi* and *na* or *naru*. The first 4 by the loss of the *i* of the terminal, and the 5th by changing *oi* to *a*, become qualitative. Ex. *takai* the "being high," *takai yama* "the mountain which is high"; *takayama*, "a high mountain". Qualitive words are made assertive by a slight vocalic augment or change in their finals, as in Tibetan and some of the Gangetico-Ultraindian tongues, in Euskarian and in many African languages. They then take directive and other relational particles like action-names.† This is common to all languages in the same stage, including the African, Euskarian, American, Tibetan &c. As in African, American &c., animate are distinguished from inanimate things, plants being included in the latter. Males take the generic prefixal particles *voto*, *vo* or *male*, and females *me*. The Japanese has two principal definitive particles *wa* and *ga*, the latter being the 3rd personal pronoun for inferiors. Both are used as gen-

* The same union of vocalic alliteration and consonantal mutation is common in the Asonesian double words and in African glossaries. It connects Japanese more immediately with the N. E. Asiatic languages.—Koriak &c.

† *Fuka*, deep; *fukai* or *fukaki*, deep-it-is; *fukaimono* deep-is-which (that which is deep); *fukakarimono*, deep-will-be-which (that which will be deep); *fukakarizaru*, deep-it-was; *fukakumbekutomo*, although it was deep. The article appears also to have an assertive power as in the Polynesian, *Kasia* &c,—*amegafuru*, it rains, literally, rain-the-or it falling.

tive postfixes. *Ga* is also possessive and *wa* (*wo, wobo, waba*) objective, the proper possessive, however, being *no*, a particle which is used possessively in almost every linguistic province in the world.* Japanese has numerous and varied formative postfixes, two of which are sometimes compounded. The directives and time particles are also postfixed, and animate objects have a postf. plural particle.

Japanese has special glossarial affinities with the N. E. languages of Asia, and the peculiarities in its general character will probably be found to connect it with these languages also and through them with the American.

The language of KORIA (Corea) is important from its position with relation to Japanese, the Manchu province and Chinese, and I shall therefore briefly notice its characters so far as I have the means of ascertaining them. The Korian phonology is very interesting. It strongly resembles the Japanese, being vocalic and sonorous in a high degree, and abounding in euphonic elisions and commutations. The most common terminal is *r*; *ng*, *n*, *m*, are frequent, the first much more so than the others. The other consonantal finals are *t*, *k*, and very rarely *s* and *p*. The only combination that occurs as one of the common consonants is *ts*. No other is observable save *rk* and of that only one instance in a long list of words. According to Prichard, the roots are often dissyllables or polysyllables and the language is polysyllabic. But an examination of the vocabularies furnished by Klaproth and Medhurst shews that although Korian is a member of the dissyllabic class, an unusual and very considerable proportion of its words are monosyllables. This, with the nature of the consonantal terminals, makes this harmonic language approximate phonetically to the Burmah-Chinese group, in all of which the same terminals are developed wherever literary influence does not prevent it. The most striking character is the predominance of the terminal *r*, the Scythico-Dravirian phonologies also affecting finals.

Its genuine Scythic character has been considerably modified by Chinese influence. Its glossary has been over-run with Chinese words, and it now affords a remarkable example of one of the most common modes by which polysyllabic words are produced, the use of double words. Dr Gutzlaff tells us that "the present spoken language consists in great part of composite words in which the words of both languages are united to express one idea," and that Chinese words are more common than native ones. This is the most extraordinary instance of an union of vocabularies with which I am acquainted. The ideology agrees with the

* Watsukaga anohitono mita "I (agentive) he (objective, i. e. him) see (past, i. e. saw)," "I him saw."

phonology in proving the languages to belong to the harmonic postpositional class of Mid-Asia.*

Vocalic harmony prevails in it as in the adjacent Japanese and Manchu. It has thus a high ethnic value, for it is an example of a monosyllabic language that has become fixed after only slightly expanding under the harmonic tendency. On comparing it with the Japanese we are struck by the abruptness of the change from a polysyllabic to a monosyllabic, and from a vocalic to a consonantal, tendency. The glossarial alliance between the two languages appears to be very remote, so that it is difficult, with our scanty materials, to trace phonetic permutations. The characters of each, taken by itself, would lead us to anticipate that words common to both would be found in a more contracted and less vocalic form in the Korian, and this appears to the case.

Manchu, as the most vocalic of the Tatar languages, approximates most to its insular neighbour. The Manchu has other special phonetic affinities to the Japanese. Amongst the commutations which the same letter sometimes undergoes in the same word is that of *f* for *k* (e. g. fako, kako). The penultimate is generally short and its vowel elided as in Japanese (e. g. tofokhon is pronounced tof^hkhon). The ideology, like that of the other Tatar languages, is almost entirely similar to the Japanese. Words are crudes. It has numerous and varied formative postfixes, two of which are sometimes compounded. The directives and time particles are also postfixed and animate objects have a postfixed plural particle. Modifications and relations are expressed by postfixes†. There are also many monosyllabic particles with an adverbial meaning, which generally take the so called infinitive and future particles of the verb. The time postfixes, like those of many other languages of the east, are not based upon our division of time as past, present and future. They look mainly to what is lost, gone or completed, and what has an existence present or prospective. The same particles may be

* Mr Bartlett in his "Progress of Ethnology" says "The Japanese have the inflections of cases, moods, tenses and voices in their language; but these features are denoted in Korean by collocation of the words, and the words themselves remain unchanged as in Chinese." This appears to be founded on a remark by Dr Gutzlaff in the Chinese Repository. "The Korean language, like other languages of eastern Asia, has neither declension nor conjugation. It agrees exactly with the Chinese, so far as regards position as a substitute for inflection." It would be clear from the phonetic character of the language alone that it could not be merely collocative like the Chinese. The notices and examples given by Dr Siebold in the *Verhandlungen van het Bataviaasch Genootschap*, place it beyond doubt that the language is a postfixal one and belongs to the Ugro-Japanese and not to the Chinese class. The time postfixes are phonetically united to the action word and undergo euphonic changes. Thus *tsjid-tja* has *tsjld-pnoi* where *dsuukiru* has *dsuukunoni*; so *tsjironta*, but *dsuukunonta*. The final consonant varies, *tsjin* future, *tsj-ra* imperative.

† Amongst these particles are transitive, reciprocal, collective, frequentative, inchoative &c. Compare the following examples with African and American aggregates, *-omine* "to drink," *ominame* "to set oneself to drink"; *omld-chime* "to come to drink," *omit-chame* "to drink together"; *galme* "to take," *gald-chame* "to take oneself."

used for the present and the future. The pronoun "we" has absolute and relative forms. The pronouns do not combine with the verb, a special Japanese affinity. It has an objective postfix like the Japanese. The collocation is the same; and, on the whole, the phonetic and ideologic resemblance is so great, that the Japanese may be considered as the most easterly and vocalic member of the mid-Asian family, or may be described as a Tatar language with a peculiarly Fino-African phonology.

The Samoiede language is a genuine member of the Ugro-Japanese alliance. In phonology it is harmonic, sonant, sibilant, and liquid. It has a strong vocalic tendency, but retains consonantal combinations and finals similar to those of the other languages of the alliance. It has no words of gender and it is doubtful if it has a plural particle. Its directive postfixes are numerous as in the Ugrian languages. The objective is *m*, which is Manchu, Cheremish Fin, Caucasian and Iranian. The possessive *lon*, *len* resembles the Lesgian *al*.* Qualitative words follow the Tatar ideology in not taking the postfixed directives of the substantives. The pronoun has various forms, separate, postfixed agentive, objective, and possessive, the last having also a postfixual form. The third pronoun is connected with the second. *Pydyr* "thou," *pydy* or *pydo* "he" &c. In Lesgian a similar connection exists between these persons, *dux* "thou," *dos* "he" &c.; but as "I" is *otis*, all three appear to be flexionally related. The 2nd and 3rd pronouns of Samoiede must be a remnant of a similar Caucasio-African system. The present and preterite tenses are little distinguished. One of the past particles, *mbi*, is the present indicative of Manchu.† In its general ideologic character Samoiede is simpler, or nearer the Tatar, than the more elaborate or complex members of the Ugro-Finish alliance.

The Fino-Ugrian languages agree in all essentials with the Tatar, but they are more agglomerative, agglutinative and fluent in phonology and more elaborated in ideology. Magyar or Hungarian is consonantal but highly harmonic and sonorous, owing chiefly to the vocalic alliteration and concord ‡. It possesses complex sibilants like the Tatar languages. Its consonantal combinations and terminals are similar to those of the ruder Dravidian languages. Amongst the latter are *nh*. It has also *tl* like Caucasian, South African, N.E. Asian and American phonologies. The Fin is very vocalic, with a great predilection for final *i*. *N* is the most common consonantal terminal, then the liquids *l*, *r*, *s*,

* These must be merely modifications of the common possessive *na*, *an* &c. In Africa *na*, *an*, *ny* &c. appears to be the original form (Egyptian, Malagasi &c.) but the *n* changes to *l*, *d*, *r*, &c. in some languages. Thus in certain members of the Mandingo group it is *la* or *da*.

† This is a wide spread asserive, as witness our own *am* and *be*. In Africa the Samoiede-Manchu recurs in the Yoruba *mbek*.

‡ Thus from the roots *lat* and *esz* are formed, under the law of vocalic concord, such formative compounds as *lathatatlansaganak*, *esztelensenek*, in which the vowel of the root assimilates that of every syllable in the compound postfix.

as in the Tatar family. The sonants *g*, *d*, *b*, are wanting. In the Fino-Ugrian languages the euphonic union between the postfix and the root is very complete. The case postfixes are numerous in Magyar and Fin, the former having 20 and the latter 14, simple and compound.

The Magyar and Fin formatives are compounded to a greater extent than the Tatar, and these western languages have consequently a greater power and freedom of expression. In Fin the qualitative as well as the substantive takes the postfixes of case and number. It has comparative and superlative postfixes. The Fin pronouns have not only postfixual possessive forms, but also a generic reflective postfix and separate reflective postfixes for all the persons (the same particle serving for singular and plural). These North Western members of the Scythic alliance thus shew special approximations to the ideologies of the Caucasian, Semitico-African and proto-Iranian formations.

The Ugrian languages have special affinities, phonetic and glossarial, with the N. E. Asiatic languages and through them with the American (Erman, Prichard iii, 323, 334; iv, 450). Prichard remarks that "the singular termination of words in *tl*," is common to Astiak and Vogulian with Mexican. The same terminal is found in N. E. Asian and Caucasian languages, and in some of the South African phonologies it is a favorite sound. A glossarial analysis and comparison proves that it is a postfixal definitive in the American and Asiatic languages in which it occurs. A particle so peculiar in its form, found in the languages of tribes so far apart though so like in name as the Aztecs and the Ostiaks, and absent or disguised in other languages, must belong to an extremely ancient formation. It is reasonable to suppose that the language in which it originated, or from which it was first widely disseminated, occupied a position nearer to the central Caucasian or Ugrian than the more remote American and African formations.

SEC. 3. THE TIBETO-ULTRAINDIAN, DRAVIRIAN AND SCYTHIC FORMATIONS COMPARED.

The affinity between these families is so great and so obvious that the notices in the preceding section have been little more than a repetition of those in chap. iv. Dravirian and Fino-Japanese have a similar development greatly in advance of the Burmah-Tibetan, and as the Dravirian linguistic formation had anciently a wider extension to the N. W., evinced by the Brahui—and the Fino-Japanese to the S.,—the present break being filled by people of a later civilisation, of whose progression to the S. W. there is satisfactory evidence,—it is *prima facie* more probable that the Indian and trans-Tibetan branches of the Scythic or postpositional alliance were at one period united, than that each was separately generated from the Burmah-Tibetan formation on its opposite

sides, and has had its own independent development. The admission that the harmonic postpositional region at one period encircled the Tibeto-Burman and purely monosyllabic province without a break, (Asonesian, in its Australian era, being included in it), would not be inconsistent with the fact of there being very considerable differences amongst the languages forming the circle. The Dravirian and the Fino-Japanese agree with each other in possessing a highly harmonic phonology, which places them at a great distance from the Burmah-Tibetan. Both are distinguished by a strong addiction to liquids (*l, r,*)—the sibilant tendency embracing Chinese also. The Tamīl phonology is more agglomerative and archaic than that of any Tatar language. Although the S. Indian phonology is very harmonic it has not the same alliterative and harmonic laws that prevail in the Fino-Japanese alliance and give so marked a phonetic character to those members that have long postfixual combinations. But in Dravirian the postfixes often change the vowel to make it harmonize with that of the root, and the general glossarial structure shews much vocalic harmony. The same tendencies are found, though less strongly marked, in the Tibeto-Ultrindian alliance. The primitive Indian phonology is much more complex and harsh than the Ugro-Japanese. But the general phonetic affinities are so striking that we may infer either that the archaic Scythic phonology possessed the strong cerebral, nasal and other remarkable sounds of the archaic Indian, or that both were, to a large extent, based on a prior formation which possessed those sounds. In both, we remark the same union of a harmonic, liquid and vocalic tendency with complex and harsh sibilants, gutturals and nasals. And in both, the euphonic and vocalic character is carried to a greater extent in some languages than in others. The Magyar may be compared with the more consonantal Dravirian languages and the Fin and Japanese with the Telugu.

Ideologically the Dravirian and Scythic formations have a close agreement, and in some common traits they differ from the Tibetan. In both, as in Chinese, the qualitative precedes the substantive and does not follow it as in Tibeto-Ultrindian and Mon-Anam. The absolute and relative forms of "*we*" are found in both. The formative systems of the Dravirian and the more developed Fino-Japanese languages are very similar in their general character and more complex than those of most of the Tibeto-Ultrindian tongues. But the simpler Indian and Tatar languages are less in advance of the latter, and the Mongol, Manchu and Japanese want the pronominal postfixes. In Malayalam these postfixes are also wanting, and in Gond they are absent in the present tense. The principal S. Indian languages are equally developed with the Turkish, and are therefore in advance of the eastern Tatar languages, whilst, like the Turkish, they are less elaborate in their formatives and formative combinations, as well as in their case postfixes, than the Fino-Ugrian. Euphonic variations in the post-

fixes, producing the differences in declension and conjugation, are common to Fino-Japanese and Dravirian. Generic distinctions in substantives are more marked in Dravirian than in Fino-Japanese. The masculine, feminine and neuter forms of the 3rd personal pronoun form the chief distinction of the Dravirian formation, for they are not found in the Scythic. Time may be minutely distinguished in Dravirian as in Turkish by auxiliaries, while the generic time particles, which are alone used in the simpler Indian and Scythic languages, are few and indefinite.

Hitherto we have made little progress in our exploration of the ethnic history and place of the Dravirian formation. The Tatar languages render it probable that the Dravirian, or one of its principal elements, was an extension of a Mid and West Asiatic formation. The resemblances, however, between the two groups are so strong, and the distance of both from the more archaic Chinese, Burman and Tibetan so nearly alike, that we can hardly be said to have advanced a step historically. But we have greatly enlarged the basis for further comparisons and have arrived at this general inference, viz, that the common element of the Dravirian, the Fin and Japanese languages, modern as it may be in relation to the Chinese and Mon-Anam formations, must be of great absolute antiquity,—much more ancient, certainly, than the occupation of Japan by the Japanese, India by the Dravirians and Finland by the Fins. The geographical, physical and other ethnic discordances between these peoples, are all so many proofs of the antiquity of the common linguistic formation and of its diffusion. Even if we did not look beyond the circle to which our comparison has now extended, and confined ourselves to the relationship between the monosyllabic and the harmonic alliances embraced in it, we are not able to say that we could historically connect the latter with the former. The various harmonic languages and groups that have been glanced at, oscillate, with considerable irregularity, between two points of development, one approximating to the cruder formations of S. E. Asia, and the other being at a considerable distance from it. But from the first point we cannot trace any distinct ethnic line leading directly back to the monosyllabic formation, nor from the second point can we descry where and how the harmonic, rhythmical and agglomerative tendency of the Scythic alliance originated. At the eastern and western extremities,—in Japanese and the Ugro-Finish group,—the harmonic power is fully developed, and the contrast with Chinese complete. Additional light must be sought in the remoter languages, and as formations are generally found in their purest and most archaic condition in the more sequestered and outlying portions of the regions over which they extend, I shall advert to the American provinces, after noticing the Caucasian, the Semitic-African and the Euskarian.

The positive results at which we have arrived may be briefly stated before proceeding. The basis of the Tibeto-Ultra-Indian, Dravirian and Scythic formations is strongly allied to Chinese, not only by its monosyllabic character but by many structural traits, and, it may be added, by glossarial affinities also. The three formations are further and more closely connected with each other by syntactic characters which are not Chinese, by the possession of a harmonic phonology,—feeble in the Tibeto-Ultra-Indian languages and powerful in the Scythic,—and, to anticipate the conclusions of subsequent sections, by numerous common roots. The Scythic languages preserve many monosyllables and the dissyllabic form is frequently traceable to the direct action of the harmonic phonology. There can be little hesitation therefore in believing that the Scythic languages at one period phonetically resembled the Tibeto-Ultra-Indian more than they now do. This, however, merely throws back the borders of the more harmonic formation, unless we find its source in the crude Tibeto-Ultra-Indian branch itself. But, taking that branch as a whole, it has much more the appearance of being the result of the advance of the already transformed Scythic phonology into the ancient and wider Chino-Ultra-Indian province, than of being a purely native modification of a Chino-Ultra-Indian formation. The Chinese and the Mon-Lau characters of the Tibeto-Ultra-Indian languages appear to be older than the Scythic. The Tibeto-Ultra-Indian formation has probably always been intermediate between the Scythic and the Chinese or Chino-Ultra-Indian. It probably preserves much of the most archaic form of the Scythic, but I can see no reason for tracing to it the origin of the harmonic phonology or for supposing that it was ever more harmonic than it now is. Whatever harmonic tendencies it possesses are alien to its general phonetic character, and may be referred to Scythic influence, a conclusion that is strongly confirmed by the large proportion of Tibetan and Ultra-Indo-Gangetic vocables that have been derived from Scythic sources.

NOTICES OF SINGAPORE.*

RAFFLES' INSTRUCTIONS ON FORMATION OF SINGAPORE.

General Order by Sir Thomas Stamford Raffles, Lieutenant Governor of Fort Marlborough and its Dependencies, Agent to the Most Noble Francis Marquis of Hastings, Governor General of India, &c. &c. &c.

The following Proclamation is published for general information:—

PROCLAMATION.

A treaty having been this day concluded between the British Government and the native authorities, and a British establishment having been in consequence founded at Singapore, the Honorable Sir T. S. Raffles, Lieutenant Governor of Bencoolen and its dependencies, Agent to the Governor General, is pleased to certify the appointment by the Supreme Government of Major Wm. Farquhar, of the Madras Engineers, to be Resident, and to command the troops at Singapore and its dependencies; and all persons are hereby directed to obey Major Farquhar accordingly.

It is further notified that the residency of Singapore has been placed under the government of Fort Marlborough, and is to be considered a dependency thereof; of which all persons concerned are desired to take notice.

Dated at Singapore, this 6th day of February, 1819.

By order of the Agent to the Most Noble
the Governor General.

(Signed) F. Croply.
Secretary.

To Major William Farquhar,
Resident and Commandant,
Singapore.

Sir,

Herewith I have the honor to transmit to you one of the copies of the treaty this day concluded between the Honorable the East India Company, and their Highnesses the Sultan of Johore, and the Tummungong of Singapore and its dependencies.

2. As the object contemplated by the Most Noble the Governor General in Council, namely, the establishment of a station beyond Malacca, and commanding the southern entrance of the

* The extracts from the records of Singapore which follow, forming part of the materials collected by T. Braddell, Esq. for a work relating to the Straits Settlements, on which he is at present engaged, have been kindly placed at our disposal by that gentleman. They will be found to contain much interesting information regarding the early history of Singapore.

Straits, has thereby been substantially accomplished, I proceed to give you the following general instructions for the regulation of your conduct in the execution of the duties you will have to perform as Resident and Commandant of the station which has been established.

3. As you have been present at and assisted in the previous negotiations, and are fully apprized of the political relations existing between the states in the immediate vicinity of this island, it is only necessary for me to direct your particular attention to the high importance of avoiding all measures which can be construed into an interference with any of the states where the authority of His Netherlands Majesty may be established. Whatever opinion may be formed with regard to the justice or nature of the proceedings of the Dutch authorities in these seas; it is not consistent with the views of His Lordship in Council to agitate the discussion of them in this country; and a station having been obtained which is properly situated for the securing the free passage of the Straits, and for protecting and extending the commercial enterprizes both of the British and native merchant, all questions of this nature will necessarily await the decision of the higher authorities in Europe.

4. It is impossible, however, that the object of our establishment at Singapore can be misunderstood or disregarded, either by the Dutch or the native authorities; and while the former may be expected to watch with jealousy the progress of a settlement which must check the further extension of their influence throughout these seas; the latter will hail with satisfaction the foundation and the site of a British establishment, in the central and commanding situation once occupied by the capital of the most powerful Malayan empire then existing in the East, and the prospect which it affords them of the continuance, improvement and security of the commercial relations by which their interests have been so long identified with those of the British merchant. It is from the prevalence of this feeling among the natives and the consequences which might possibly arise from it, that I am desirous of impressing on your mind the necessity of extreme caution and delicacy, not only in all communications which you may be obliged to have with the subjects of any power under the immediate influence of the Dutch, but also in your intercourse with the free and independant tribes who may resort to the port of Singapore either for the purposes of commerce or for protection and alliance. The offer which is understood to have been made to the Sultan by the Bugguese, is a sufficient proof that in all communications regarding the proceedings of the Netherlands Government we should carefully guard against the expression of any sentiment of dislike or discontent, however justly those feelings might be excited, lest our motives be misconstrued, not only by the Dutch but by the natives themselves.

5. With regard, however, to those states which have not yet

fallen under their authority, it is justifiable and necessary that you exert your influence to preserve their existing state of independence. If this independence can be maintained without the presence of an English authority, it would be preferable, as we are not desirous of extending our stations; but as from the usual march of the Dutch policy, the occupation of Tringano, and the extension of their views to Siam, may be reasonably apprehended, a very limited establishment in that quarter may become ultimately necessary. It is at all events of importance to cultivate the friendship of these powers, and to establish a friendly intercourse with them; and as the recent application from the Sultan of Tringano for a small supply of arms affords us a favorable opportunity of advancing towards this object, you will avail yourself of the first opportunity to comply with his request.

6. A similar line of policy in relation to the states of Pahang and of Lingin will be conducive to the maintenance of the influence and just weight which the English nation ought properly to possess in these seas. As it is my intention to return to this island after the completion of the arrangements at Acheen, I shall then be able to avail myself of the information you may have collected in the intervening period, relative to the political state of Borneo Proper, Indragiri and Jambi. In the meantime, it is probable that a knowledge of our establishment at this station will have considerable weight in preventing these powers from falling under the influence of the Dutch.

7. With reference to the native authorities residing under our immediate protection, it is only necessary for me to direct your attention to the conditions of the treaty concluded with these chiefs; which it will be incumbent on you to fulfil under any circumstances that may arise, in a manner consistent with the character and dignity of the British Government. In the event of any question of importance being agitated by the Dutch Government at Batavia, or the authorities subordinate to it, you will refrain from entering into any discussion than can be properly avoided, and refer them to the authority under which you act.

8. To enable you to conduct the civil duties of the station with efficiency, I have appointed Lieutenant Croply your assistant; and that officer will conduct the details of the Pay Department, Stores and Commissariat with such other duties as you may think proper to direct. The allowances for your assistant have been fixed at Spanish dollars 400 per month, subject to the confirmation of the Supreme Government.

9. As the services of Lieutenant Croply as my acting Secretary, will be for some time required under my immediate authority, Mr Garling of the Bencoolen Establishment will officiate until his return. In the event of its being necessary for you to leave the station or of any accident depriving the Company of your services, your assistant is appointed to succeed to the temporary charge until further orders.

10. Mr Bernard has also been appointed to take charge provisionally of the duties of the port as Acting Master Attendant and Marine Storekeeper, and in consideration of the active duties that may be required in this department, and the general services which this officer may be required to perform, he is allowed provisionally to draw a monthly salary of 300 dollars per month.

11. As the convenience and accommodation of the port is an object of considerable importance, you will direct your early attention to it, and to the formation of a good watering place for the shipping. You will also be pleased to establish a careful and steady European at St. John's with a boat and small crew, for the purpose of boarding all square sailed vessels passing through the Straits and of communicating with you either by signals or by a small canoe as you may find most advisable.

12. It is not necessary at present to subject the trade of the port to any duties; it is yet inconsiderable, and it would be impolitic to incur the risk of obstructing its advancement by any measure of this nature.

13. In determining the extent and nature of the works immediately necessary for the defence of the port and station, my judgment has been directed in a great measure by your professional skill and experience. With this advantage and from a careful survey of the coast by Captain Ross, aided by my own personal inspection of the nature of the ground in the vicinity of the Settlement, I have no hesitation in conveying to you my authority for constructing the following works with the least delay practicable:—

On the hill overlooking the Settlement, and commanding it and a considerable portion of the anchorage, a small Fort, or a commodious block-house on the principle which I have already described to you, capable of mounting 8 or 10 pounders and of containing a magazine of brick or stone, together with a barrack for the permanent residence of 30 European artillery, and for the temporary accommodation of the rest of the garrison in case of emergency.

Along the coast in the vicinity of the Settlement one or two strong batteries for the protection of the shipping and at Sandy Point a redoubt and to the east of it a strong battery for the same purpose.

The entrenchment of the Cantonment by lines and a palisade, as soon as the labor can be spared from works of more immediate importance.

14. These defences, together with a Martello tower on Deep Water Point, which it is my intention to recommend to the Supreme Government, will in my judgment render the Settlement capable of maintaining a good defence. The principle on which works were charged for at Malacca, is to be considered as applicable to this station, and it is unnecessary for me to urge on you the necessity of confining the cost of these works within the narrowest

limits possible. As the construction of them, however, will necessarily demand a greater portion of care and superintendence than the performance of your duties will permit you to devote to them, I have appointed Lieutenant Ralfe of the Bengal artillery to be assistant Engineer. This officer will likewise have charge of the ordnance and military stores, and for the duties attendant on both these appointments conjoined I have fixed his salary at Spanish dollars 200 per mensem, to commence from the 1st instant, and subject to the confirmation of the Supreme Government.

15. As you will require the aid of a Staff officer to conduct the duties of the garrison, I have thought proper to authorize the appointment of a cantonment adjutant on the same allowances lately authorized at Malacca. As this officer may be considered your personal staff, I shall not make any permanent arrangement regarding it, but have appointed Lieutenant Dow to the temporary performance of its duties.

16. The indent for ordnance and stores which you have handed to me shall be transmitted to Bengal without delay, and I request you will lose no time in the erection of store-houses for their reception. An application for the number and description of troops which you have recommended to form the garrison of the residency will accompany the indent, together with an application for provisions equal to their supply for 12 or 15 months.

17. I should not think myself justified at the present moment in authorizing the erection of a house for the accommodation of the chief authority, but I shall take an early opportunity of recommending the adoption of that measure, or in the event of the Supreme Government declining to authorize it, the grant of a monthly allowance sufficient to compensate for the inconveniences to which, in the infancy of the settlement, the Resident is necessarily liable. A store-house for the Commissariat department is at present of indispensable necessity, and you will accordingly be pleased to erect a house of this description, of such materials as can be procured, and as soon as you may find practicable. A magazine built of such materials, for the military stores, would be subject to some risk; and I therefore confide to your professional judgment the adoption of such measures for their security as you may judge most expedient under present circumstances.

18. For a very short period it may be necessary to retain the brig Ganges as a store vessel, but I rely on your discharging her the moment her services can be dispensed with.

14. In the event of your adopting this arrangement, you will be pleased immediately to tranship to that vessel the public property now on board the H. C. hired ship Mercury, whose charter expires on the 24th instant, previously to which you will accordingly be pleased to discharge her from the public service. You

will inform the commander, that I am entirely satisfied with his conduct while he was under my authority, and that as tonnage will probably be required to convey troops and stores from P. of W. Island, I shall be happy, in the event of his early arrival at that port, to consider his request for the further employment of his ship to be entitled to some consideration.

19. You are already apprized that the H. C. ship *Nearchus* has been put under your orders, and the services of the schooner *Enterprize* will be also available by you, during the remainder of the period of two months for which she was engaged.

20. The accounts of the residency are those which detail the receipt and disbursement of the public money. These are principally:—
Accounts.

1. An account particulars of military disbursements in which every military abstract and disbursement is clearly and correctly entered.

2. A general account particulars, which will comprize the particulars of every disbursement of whatever nature, and containing also, under the head of "Military Establishment," a correct copy of No 1, and,

3. A general treasury account, shewing on the one side the general amount of the disbursement made on each particular account or head, with the balance remaining on hand; and on the other, the balance which remained on the 1st of the month, together with all the sums which may be received during the course of it.

21. The accounts of the commissariat cannot at present be arranged according to the established forms, they can however be kept with correctness by Mr Garling, and I shall take care to procure and to forward from Pinang the necessary forms under which the first assistant will probably be able to arrange them on his taking charge of his appointment. You will of course exercise a strict superintendence over this department, no disbursements from which are to be made without your authority; and you will be pleased to examine the accounts rendered to you previously to transmitting them to Fort Marlborough.

22. A quarterly account of expenditure and remains of military stores will be transmitted to me. You will also be pleased to forward the usual returns to the Presidency of Fort William agreeably to the regulations of the service.

23. It does not occur to me that there is any other point of importance on which it is necessary at present to give you any instructions. I shall probably return to this residency after a short absence, and if in the mean time any important matter should occur, which I have not anticipated in this letter, I have the satisfaction afforded me by a perfect reliance on your acknowledged zeal, in the advancement and protection of the honor and

interests of our country, moderated by the prudence and judgment which the infancy of our present establishment so particularly demands.

I have &c.,
(Signed) T. S. Raffles.

Singapore, the 6th }
February, 1819. }

Treaty of friendship and alliance concluded between the Honorable Sir Thomas Stamford Raffles, Lieutenant-Governor of Fort Marlborough and its dependencies, Agent to the Most Noble Francis Marquis of Hastings, Governor-General of India &c. &c. &c. for the Honorable East India Company, on the one part, and their Highnesses Sultan Mahomed Shah, Sultan of Johore, and Dattoo Toomoonggong Sri Maharajah Abdool Rachman, Chief of Singapore and its dependencies, on the other part.

Article 1st. The preliminary articles of agreement entered into on the 30th January, 1819, by the Honorable Sir T. S. Raffles, on the part of the English East India Company and by Dattoo Toomoonggong Sri Maharajah Abdool Rachman, Chief of Singapore and its dependencies, for himself and for Sultan Hussein Mohamed Shah, Sultan of Johore, is hereby approved, entirely ratified and confirmed by His Highness Sultan Mohamed Shah.

Art. 2nd. In furtherance of the objects contemplated in such preliminary agreement, and in compensation of any and all the advantages, which may be foregone now or hereafter by His Highness Sultan Hussein Mohamed Shah, Sultan of Johore, in consequence of the stipulations of this treaty, the Honorable the East India Company agree to pay to his aforesaid Highness the sum of Spanish dollars five thousand annually, for and during the time the said Company may by virtue of this treaty maintain a factory or factories on any part of His Highness' hereditary dominions, and the said Company further agree to afford their protection to His Highness aforesaid, as long as he may continue to reside in the immediate vicinity of the places subject to their authority. It is, however, clearly understood by and explained to His Highness, that the English (East India Company) in entering into this alliance and in thus engaging to afford protection to His Highness, is to be considered in no ways bound to interfere with the interior politics of his States or engaged to assert or maintain the authority of His Highness by force of arms.

Art. 3rd. His Highness Dattoo Toomoonggong Sri Maharajah Abdool Rachman, Chief of Singapore and its dependencies, having by preliminary articles of agreement, entered into on the 30th January, 1819, granted his full permission to the Honorable the East India Company to establish a factory or factories at Singapore or any other part of His Highness' dominions, and the said

Company having in recompense and in return for the said grant settled on His Highness the yearly sum of Spanish dollars three thousand and having received His Highness into their alliance and protection, all and every part of the said preliminary articles is hereby confirmed.

Art. 4th. His Highness Sultan Hussein Mohamed Shah, Sultan of Johore, and His Highness Datto Toomoonggong Sri Maharajah Abdool Rachman, Chief of Singapore, agree to aid and assist the Honorable East India Company, against all enemies that may assail the factory or factories of the said Company, established or to be established in the dominions of their said Highnesses respectively.

Art. 5th. His Highness Hussein Mohamed Shah, Sultan of Johore, and Datto Toomoonggong Sri Maharajah Abdool Rachman, Chief of Singapore, agree, promise, and bind themselves, their heirs and successors, that for as long a time as the Honorable the English East India Company shall continue to hold a factory or factories on any part of the dominions subject to their Highnesses aforesaid, and shall continue to afford to their Highnesses support and protection, they, their said Highnesses, will not enter into any treaty with any other nation and will not admit or consent to the settlement, in any part of their dominions, of any other power, European or American.

Art. 6. All persons belonging to the English factory or factories, or who shall hereafter desire to place themselves under the protection of its flag, shall be duly registered and considered as subject to the British authority.

Art. 7th. The mode of administering justice to the native population shall be subject to discussion and future arrangement between the contracting parties, as this will, necessarily, in a great measure depend on the laws and usages of the various tribes, who may be expected to settle in the vicinity of the English factory.

Art. 8th. The port of Singapore is to be considered under the immediate protection and subject to the regulation of the British authority.

Art. 9th. With regard to the duties which it may hereafter be deemed necessary to lay on goods, merchandize, boats, or vessels, His Highness Datto Toomoonggong Sri Maharajah Abdool Rachman is to be entitled to a moiety or full half of all the amount collected from native vessels; the expenses of the port, and collection of the duties to be defrayed by the British government.

Done and concluded at Singapore, this 6th day of February, in the Year of our Lord, 1819, answering to the 11th day of the month, Rubbi-Val-Akhir and Year of the Hujurat 1234.

(Signed) T. S. RAFFLES,

Agent to the Most Noble the Governor-General with the States of Rhio, Lingin and Johore.

Seals of their Highnesses the Sultan and Toomoonggong.

To Major William Farquhar,
Resident &c. &c.

Singapore, 25th June, 1819.

Sir,

1. Previous to my departure, I think it necessary to call your particular attention of the 11th para. of my letter of the 6th February, and to the importance of immediately improving the conveniences of the port for shipping, an object to which in the present advanced state of the Settlement all others ought to give way.

2. Points of primary importance to be attended to, should be the construction of convenient watering places, and affording to ships the means for watering, ballasting, as well as loading, with the least possible delay. The want of these conveniences has already been felt in several instances which have occurred during my stay here, and I feel satisfied that you will concur in the necessity of giving your early attention to this subject, as well as to the removal of the present temporary buildings between the stores and the river, and the erection of a convenient shed or bankshall at which merchants may load their goods. The removal of the bazar from its present site is indispensable.

3. With regard to Police and the administration of justice, it does not appear to me necessary in the present state of the Settlement that any precise regulations should yet be laid down. As Resident, you are necessarily vested with the authority of chief magistrate and will of course exercise that authority, as is usual in places subject to British control, but where British laws may not have been yet introduced. As also the larger portion of the population may in a certain degree be considered as camp followers and consequently subject to your military authority as commandant, it will be left to your discretion to act in either of these capacities according to circumstances, by which, with the assistance of the native authorities, you will be fully competent to provide for an efficient police and the settlement of such matters as do not require a more regular judicial proceeding. The Chinese, Bugguese and other foreign settlers are to be placed under the immediate superintendence of chiefs of their own tribes, to be appointed by you, and those chiefs will be responsible to you for the police within their respective jurisdictions.

4. In higher cases of a criminal nature for which the military regulations or usage may not provide, the law of the country as it exists must necessarily be considered in force. The mode in which this law is to be carried into effect, will hereafter be defined as experience may direct, and in the meantime the present mode may be observed as far as in your judgment may appear advisable for the attainment of substantial justice. In the conduct of these proceedings your will of course exercise a personal superintendence and your sanction and confirmation is to be considered necessary to all

decisions. It is to be hoped that cases of this nature will be of rare occurrence, and it is considered of importance that disputes between natives should as far as possible be left to be settled among themselves, according to their respective usages and customs.

5. These duties as above directed must in all cases be exercised by yourself or your assistant, as your representative, and cannot be delegated to any separate authority.

6. The whole space included within the Old Lines and the Singapore river is to be considering as Cantonments and of course no ground within this space can be permanently appropriated to individuals. Whenever you may have planned the lines, parades &c. for the troops and set apart sufficient accommodation for magazine &c., it will be necessary to allot sufficient space in a convenient and proper situation for officers' bungalows. The extent of each to be regulated by you according to circumstances, and the ground to be occupied by the officers as is usual in other Cantonments. The residency of the Tumonggong is of course to be considered the only exception. The whole of the hill extending to the fort within the two rivers and the fresh water cut is to be reserved for the exclusive accommodation of the Chief Authority and is not to be otherwise appropriated excepted for defences.

7. Beyond these limits, the opposite point of the river, including the whole of the lately cleared high ground, and a space of 200 yards from the old lines, should also be reserved entirely for public purposes and no private building whatever for the present allowed within the same. In the native towns, as they have been and will be marked out, proper measures should be taken for securing to each individual the indisputable possession of the spot he may be permitted to occupy, which should be regularly registered in your office, certificates of which may be granted.

8. The European town should be marked without loss of time; this should extend along the beach from the distance of 200 yards from the lines as far eastward as practicable, including as much of the ground already cleared by the Bugguese as can possibly be required in that direction, re-imbursing the parties the expense they have been at in clearing and appropriating to them other ground in lieu. For the present the space lying between the new road and the beach is to be reserved by government, but on the opposite side of the road, the ground may be immediately marked out into twelve separate allotments of equal front, to be appropriated to the first respectable European applicants. To these persons a certificate of registry and permission to clear and occupy may be granted, according to the following form:—
“No.—This is to certify that A. B. has permission to clear a spot of ground situated and of the following dimensions
and to occupy the same according to such general regulations as are now or may hereafter be established for the Factory of Singapore.”

9. Whenever these allotments may be appropriated, others of convenient dimensions may in like manner be marked out in line and streets or roads formed according to regular plan.

10. It would be advisable that a circular carriage road should be cut in each direction from the cantonments during the present dry season.

11. A bridge across the river so as to connect the cantonments with the intended Chinese and Malay towns on the opposite side of the river, should be constructed without delay and as soon as other more immediate works are complete a good bungalow for the residence of the chief authority may be constructed on the hill.

I have &c.

(Signed) T. S. RAFFLES.

Singapore, 25th June, 1819.

FREE PORT.

Proclamation,

By the Hon'ble Sir T. S. Raffles, Lieutenant-Governor of Fort Marlbro' and its Dependencies.

Whereas complaints having been made to the Lieutenant-Governor that a certain individual named Wan Allee has lately assumed to himself the exclusive privilege of retailing artaps for the use of the Settlement, and there being reason to believe that the parties who import these and other necessary supplies may not be fully aware of the principle of freedom and of open and fair competition which it is the desire of government to secure to all descriptions of traders;—

Notice is hereby given, that with the exception of the regulations which may be established for restricting the consumption of opium and spirits, and the vice of gambling, and of such as may be established for the markets, and among the Chinese respecting the sale of pork, which are adopted as matters of police for the general benefit of the whole community, the trade in all articles whatever is in every respect open and free to all persons without imposition of any kind whatever, the parties being at liberty to sell to whom they please without restriction.

That no person may plead ignorance of this regulation, the same is directed to be translated into the native languages and in a particular manner explained to the venders of artaps, timbers, spars, fire-wood, agar-agar, &c. and published by beat of gong and affixed at the usual places for general information.

Given by me at Singapore, this 21st November, 1822.

(Signed) T. S. RAFFLES.

NATIVE NUISANCES.

To Lieutenant-Colonel Farquhar,
Resident.

Sir—I have the directions of the Lieutenant-Governor to request you will take immediate measures for preventing the Chinese from continuing the practice of letting off fire works at the Kramat you have allowed to be erected on the government hill.

The Lieutenant-Governor regrets exceedingly that any such establishment should have been permitted by you, on a spot so close to the site which has been set apart for the residence of the chief authority, and he trusts you will see the propriety of causing the discontinuance of the nuisance.

The Lieutenant-Governor desires me to state that he was disturbed during the whole of last night by the nuisance complained of.

I am at the same time directed to request you will cause to removal of the Chinese moveable temple and lights from the great tree near the lines and which is included within the space proposed to be reserved for the Church.

I have the honor to be &c.

(Signed) L. N. HULL,

Acting Secretary.

Singapore, 4th February, 1823.

MAGISTRATES.

List of gentlemen resident at Singapore who are considered competent to act as Magistrates and whose names are enrolled under the provisional regulation No. 3 of 1823, entitled "A regulation for the establishment of a Provisional Magistracy and the enforcement of a due and efficient police at Singapore, with certain provisions for the administration of justice in cases of emergency."

Alexander L. Johnston, Esquire.	D. Clark	Esquire.
James Argyle Maxwell,	John Morgan,	"
David S. Napier,	Alexander Hay,	"
A. Read,	A. Guthrie,	"
Claude Queiros,	A. Farquhar	"
Charles Scott,	J. King,	"
John Purvis,	G. Mackenzie.	"
Alexander Morgan.		"

Singapore, 1st February, 1823.

Letter of Instructions to Mr Crawford on Raffles' departure.

No. 14.

To John Crawford, Esquire,
Resident of Singapore.

Sir,

Having communicated so fully with you personally, on the affairs of Singapore and our interests to the eastward, and so entirely concurring as we do in all general questions of policy relating to them, it is only necessary that in transferring to you the future administration of this Settlement, I should advert to such points of detail as may require to be particularly defined.

2. By the treasury accounts for the past month of May, it appears that the balance in hand on the 1st of June amounted to Spanish dollars 15,234.85 and that the same has been duly handed over to you.

3. For the disbursement of this balance and of such sums as you may from time to time deem it proper to take up for the public service, you will of course account to the Governor General in Council, to whom you will forward your accounts monthly and quarterly, according to the forms heretofore in use in sending the accounts to Bencoolen.

4. All accounts of the Settlement, including the receipts and disbursements up to the 31st May (ultimo) inclusive, will be closed at Bencoolen, but from the 1st instant they are to be examined and audited in Bengal.

5. In raising your supplies for the public treasury, I recommend the principle laid down by my proclamation regarding the receipts and issues being in hard Spanish dollars and for receiving tenders by fair and open competition.

6. Enclosures Nos. 1 and 2 are lists of the Civil and Military establishments (staff) as at present authorized, to take effect from the 1st instant; they exceed in a trifling degree those at present authorized by the Governor General in Council, but as it is my intention to address that authority fully on the subject in explanation, you will continue them until you may receive orders to the contrary.

7. The Governor General in Council having authorized the appointment of a responsible assistant to the Resident, Mr Bonham, of the Bencoolen Civil Service, has been appointed to that situation, and I trust his conduct will merit your confidence; as, however, he is a young man and cannot be expected at present to have that weight in society that so experienced and responsible an officer as Captain Murray must have, it is left to your discretion to make such temporary provision to supply your place in case of accident, or of your leaving the settlement, as may be necessary for the public service, pending the orders of the Governor General on the subject, it being understood that your Civil Assistant is

the proper officer to supply your place when absent, if he is competent to the duty.

8. The peace of small settlements being frequently disturbed by disputes concerning rank, particularly of the ladies, I think it would be advisable for you to avoid fixing any real rank whatever. Good breeding will always pay due deference to those who have any particular claims to precedence, at the same time that it will prevent the latter from claims it may not be agreeable to others to acknowledge and as far as the public service is concerned your particular instructions according to the occasion will define what may be necessary.

9. The proclamation of 1st January, defines the form in which all regulations of a general nature are to be drawn out, and the several provisional regulations of 1823, contain all such general laws and regulations as are now in force.

10. With regard to the allotment of ground already granted, every detailed information will be found in the office of the Registrar and executive officer. The last grant issued by me is No 574.

11. The enclosed extract of the resolutions of the Governor-General in Council, will place you in possession of (the opinion of) that authority regarding the principle on which ground should in future be disposed of, and you will of course pay particular attention to the same. The advertisement of the 31st ultimo provides for the cases particularly referred to by the Supreme Government, in which I have substituted an annual quit rent for the payment of a capital sum as purchase money. On a reference to the register of grants it appears that the quit rents for grounds in the vicinity of the town, already amount to an annual sum exceeding 3,000 Spanish dollars, which affords a permanent interest of 5 per cent on a capital of 60,000 Spanish dollars, and exceeds by 20,000 dollars, the amount for which these particular lots were disposed of, after deducting for these lots which were granted in lieu of others and for which no purchase money was to be exacted.

12. By the accounts of the Town Committee, just delivered, you will perceive that the amount advanced by Government as compensation for removing these houses to make room for the Commercial establishments, on the opposite side of the river, will be dollars 10,259 for the China campong and dollars 1,704 for the Chuliah campong, and enclosure No 4 contains the plan proposed by the Town Committee for recovering those amounts for the parties who are now enjoying the benefit of it. You will adopt this or such other arrangement as you may deem most just and proper and at the same time calculated to meet the convenience of the parties.

13. With regard to the ground between the Toomoonongong's and the sea, you will also perceive on reference to the same accounts, that the total amounts stipulated for by the Committee is 25,706½ Ct. dollars, and that of this sum 14,756½ has already

been paid, and 10,950 remain due to the parties, exclusive of the compensation granted to Mr Quieros, Captain Methuen and Mr Bernard, regarding which I have addressed you in a separate letter of this date.

14. It will further be seen by the said accounts that a sum of Ct. dollars 6,305 has been stipulated by the Committee to Chinese and others removing from the beach at Campong Glam &c, and that of this sum there remains still due dollars 4,133½.

The total amount compensations sanctioned by the Committee therefore amount in the whole to Ct. dollars 43,974½, of which sum dollars 24,886 has been already paid and dollars 19,088½ still remain due, and for this amount of balance due, you will be pleased to make such advances from the Treasury to the License fund, as may be required from time to time in fulfilment of the engagements entered into, it being desirable that until the accounts of compensation are finally closed, the whole should stand as disbursements from the License fund as heretofore.

16. Whenever the License fund shall have satisfied all these demands, and repaid into the Treasury the amounts from time to time advanced into it, you will be pleased to receive the amount so falling due as the revenue of Government, and carry it to account in the Treasury accordingly.

17. The remaining duties to be performed by the Committee may I conceive be conducted by your assistant and the executive officer, who are well acquainted with the details.

18. The ground plan of the town and its vicinity with which you have been furnished, with the explanations which I have personally given, will have placed you fully in possession of the arrangements I have had in view in this respect, and for all further details and information, I refer you to Lieutenant Jackson, the executive officer, who fully comprehends them and will be able to give you every satisfaction.

19. In laying out the town, I particularly recommend to your attention the advantage of an early attention (not only) to the provision of ample accommodation for the public service hereafter whenever it may be required, but to the beauty, regularity and cleanliness of the settlement; the width of the different roads and streets should be fixed by authority, and as much attention paid to the general style of building as circumstances admit.

20. The only public works of importance at present in hand, are the bridges and Sepoy lines, the former is executed by contract and the latter on estimate by the executive officer.

21. For your information respecting the form to be observed in the execution of public works, I enclose copy of a letter from the Secretary to the Governor General in Council, in the Territorial Department, under date the 20th January last. There are other points in this letter which will deserve your attention and particularly its conclusion, where a principle is laid down of

which you should never lose sight, namely, that advantages in a financial point of view "must chiefly be looked for in a careful system of economy, avoiding unnecessary expense, rather than seeking revenue to cover it."

22. Enclosure No. contains the agreement this day entered into with their Highnesses the Sultan and Toomongong, and which it is trusted will prove satisfactory to all parties, I have had reason to be much satisfied with the honest intentions of these chiefs and particularly of their attachment to our Government, and I recommend them particularly to your personal kindness and attention. There are not wanting mischievous people, however, to mislead them and you should be on your guard against these.

23. Their Highness the Sultan and Toomongong seem to be under some apprehension regarding the safety of Johore, Rajah Moodah of Rhio, under the direction of the Dutch authorities, having made several attempts to enforce his authority there. You are recommended to take an early opportunity of conferring with their Highnesses on the subject, and adopting such provisional arrangements for the security of the place as may be prudent, without involving us in any new question with the Dutch.

24. You are personally so well acquainted with the politics of Singapore, the nature of our term and the importance of avoiding all further clashing with the Dutch authorities, that it is unnecessary for me to give you particular instructions on this head.

25. I shall make a point of forwarding to you for record in the Resident's office at Singapore, copies of all correspondence which has taken place with the Supreme Government respecting the settlement, and in the event of my immediate departure preventing my communicating with the Governor General in Council the particulars of the transfer until your monthly accounts are forwarded, you will be pleased to transmit with the same to that authority a copy of the instructions now given to you, with an intimation, that it is my will to address the Governor General in Council more fully on the subject by an early opportunity.

26. Should I have omitted any particular points, I shall hereafter communicate with you further, and in the meantime I trust the above will be sufficient for your guidance as far as concerns the immediate management of Singapore.

27. Having given you these instructions as far as regards your situation as Resident of Singapore, I am desirous also of calling your attention, on some points, to the line of policy which it appears to me advisable for you to pursue more generally in your political capacity in the Archipelago. On this subject one of the most material points is our political relations with Siam and the Malayan states alleged to be tributary to it. On this point it is incumbent upon me to state with candour that the policy hitherto pursued by us has in my opinion been founded on erroneous principles. The dependence of the tributary states in this case is found-

ed on no national relation which connects them with the Siamese nation. These people are of opposite manners, language, religion and general interests, and the superiority maintained by the one over the other, is so remote from protection on the one side or attachment on the other, that it is but a simple exercise of capricious tyranny by the stronger party, submitted to by the weaker from the law of necessity. We have ourselves for nearly forty years been eye witnesses of the pernicious influence exercised by the Siamese over the Malayan states. During the revolution of the Siamese government these profit by its weakness, and from cultivating an intimacy with strangers, especially with ours over other European nations, they are always in a fair train of prosperity. With the settlement of the Siamese government, on the contrary, it invariably regains the exercise of its tyranny and the Malayan states are threatened, intimidated and plundered. The recent invasion of Quedah is a striking example in point, and from the information conveyed to me it would appear that that commercial seat, governed by a prince of most respectable character, long personally attached to our nation, has only been saved from a similar fate by a most unlooked for event. By the independent Malayan States, who may be supposed the best judges of this matter, it is important to observe that the connection of the tributary Malays with Siam is looked upon as a matter of simple compulsion. Fully aware of our power and in general deeply impressed with respect for our national character, still it cannot be denied that we suffer, at the present moment, in their good opinion by withholding from them that protection from the oppression of the Siamese which it would be so easy for us to give; and the case is stronger with regard to Quedah than the rest, for here a general impression is abroad amongst them, that we refuse an assistance that we are by treaty virtually bound to give, since we entered into a treaty with that state, as an independent power, without regarding the supremacy of Siam or ever alluding to its connection for five and twenty years, after our first establishment at Pinang). The prosperity of the Settlement under your direction is so much connected with that of the Malayan nations in its neighbourhood, and this again (so much depends) upon their liberty and security from foreign oppression, that I must seriously recommend to your attention the contemplation of the probable event of their deliverance from the yoke of Siam, and your making the Supreme government immediately informed of every event which may promise to lead to that desirable result.

28. The suppression of piracy in the seas of the Archipelago is the second point to which I would call your attention. It would be extremely desirable that a general plan having this in view were put in force in conjunction with the government of Prince of Wales Island, the Dutch authorities and the principal native independent states. Your central position at Singapore will afford you

superior means for submitting such a plan to the supreme authorities. It is true that since the establishment, of late years, of vigorous and powerful governments in these seas, on our part and that of the Dutch, piratical attacks on European vessels have become comparatively rare. They continue however extremely frequent on native vessels, and afford serious obstacles to that intercourse by which the productions of the neighbouring nations are collected at this emporium, and our wares and manufactures disseminated in return. Piracy for example is so frequent in the Straits of Malacca, between Malacca and Pinang, that the square-rigged vessels of the Chuliahs or natives of the Coromandal Coast, a timid people, are on this account precluded from coming further than Pinang and Achin, and thus the trade of fifty or sixty brigs and ships are in a great measure lost to Singapore, for an inconsiderable portion of these people, only, tranship themselves and their goods on British vessels for security and thus find their way to us. This peculiar obstacle may be remedied by directing the vessel, for which application is made to the Supreme government, to afford them convoy once a year from Pinang, an employment which will not materially interfere with the other duties to which it may be appointed.

29. The most formidable piratical depredations here, are committed by the hardy and ferocious races which inhabit the Sooloo and other islands lying between Borneo and the Philippines. These portions of the east insular seas are little known to us, and the first object will be to obtain some accurate knowledge respecting their social and political condition. I especially recommend this subject to your attention; valuable information regarding them may be collected from the numerous native traders already frequenting Singapore, and a personal visit to the countries in question may hereafter be deemed advisable. In the meantime the maintenance of a friendly and conciliating correspondence with the chiefs of the tribe and nations in question, and generally with all independant tribes of the Eastern islands within the limits of the authority given to you by the Supreme government, will strengthen the confidence of the native inhabitants in general and promote the important purposes of your appointment.

I am &c.

(Signed) T. S. RAFFLES.

Singapore, 7th June, 1823.

Sir T. S. Raffles's Letter to the Supreme Government.

7th June, 1823.

Local Administration.

My proclamation of the 1st January last, having defined the form in which all regulations of a general nature are to be drawn out, I have directed the Resident to adhere to the same and in the

general administration of the Settlement to be guided by the Regulations No. I. to II. of 1823 already passed, with such others as may be hereafter passed under the provisions of Regulation No. III. of 1823, subject to such instructions as he may receive from the Supreme government on the subjects to which they relate.

Allotment of Ground.

The principle laid down in the Resolution of the Supreme Government in the Political Department of the 21st March last, and transmitted with Mr Secretary Swinton's letters of the same date, regarding the manner in which ground should be disposed of at Singapore, has been duly made known, and the public have been apprized that all ground will be considered as let on a perpetual lease or for a term of years, that the plan of disposing of the ground to the highest bidders is approved, and that the biddings for the same in future are to be made in quit-rent, the lease being granted without any present payment to the parties who may offer the largest amount of annual rent.

This arrangement had previously occurred as the most convenient, and with the exception of the particular lots alluded to, all other allotments made by me were disposed of for the annual quit-rent offered, so that no inconvenience has resulted from this modification of the original plan.

With regard to the particular cases referred to, in which the Supreme government has directed that the amount purchase money should be commuted for an annual quit-rent, I have the satisfaction to report that the same has been carried into effect on the following principle.—The total amount of purchase money, agreeably to the account already transmitted to the Supreme government, was 56,000 Spanish Dollars, but of this amount nearly one-half was purchased by persons who were compelled to remove from the opposite side of the river, in favor of whom it was a condition that purchase money would be foregone.

On reference to the registry of grants already transmitted to the Supreme government, it will appear that the quit-rents for ground in the town and its vicinity already amount to upwards of 3,000 Spanish Dollars, which affords a permanent interest of 5 per Cent on a capital of 60,000 Spanish dollars, exceeding by one-half the amount due on account of purchase money for the particular lots in question, and which may be considered as by far the most valuable portion.

Under these circumstances, and as I had in the grants provided for either alternative by including a fixed quit-rent corresponding with the particular value of each lot, I have not found it necessary to do more with regard to allotments for commercial purposes than to declare that government has foregone the purchase money in consideration of the quit-rents, the ground being considered as let on a perpetual lease as directed by the Supreme government.

One of the conditions on which this ground was disposed of, was, that the purchasers should compensate the occupants of temporary buildings who were obliged to make room for them, and the removal of these persons having been conducted by a committee appointed by government, the disbursements on this account have amounted to current dollars 10,159; this amount has been advanced by government but it will be re-imbursed by the parties and the resident has been recommended to adopt such arrangement for this purpose as may be most convenient for them.

With regard to the compensation to be paid by government to individuals removing from the space between the Toomoon-gong's and the sea, I shall have the honour to address the Supreme government more fully in a separate letter, and it may suffice to observe in this place, that notwithstanding the various difficulties thrown in my way by the local authority, I have eventually had the satisfaction of completing this important arrangement to the satisfaction of all parties, and so as to render all further reference or dispute on the subject unnecessary.

Arrangements with the Sultan and Toomoon-gong.

The advantage which had been taken of the general terms in which, from political considerations, it was deemed most advisable that the treaty with their Highnesses the Sultan and Toomoon-gong should in the first instance be expressed, and the extraordinary principle assumed by Lieutenant Colonel Farquhar, and maintained by him in opposition to my authority, that the disposal of the land was vested in the native chiefs, that the government of the country was native and the port a native port, rendered it indispensable that these points should be fully explained and more clearly defined, and as that officer had also permitted various exactions and privileges to be enjoyed by their Highnesses incompatible with the freedom of the port, I have availed myself of the opportunity offered in negotiating with their Highnesses for the payment of an equivalent for the port duties, to stipulate such arrangements as seem essential to form the basis of the good understanding to be maintained for the future. With reference to the political discussions which have taken place regarding the Settlement, and the questions which have arisen regarding its tenure, I did not deem it prudent in any way to alter or revise the original treaty, but the conventional agreement now made may be considered equally binding on the parties, and may of course be hereafter adopted as the basis of any more definite treaty to be entered into, after the permanency of the Settlement has been established.

The amount stipulated to be paid to their Highnesses is,—to the Sultan 1,500 current dollars and to the Toomoon-gong 800 current dollars per month, or in the whole current dollars 2,300, equal to Spanish dollars, at 15 per cent premium (the present rate) 1,955.

This is somewhat in excess of the 500 dollars originally intended for each, but I found it impracticable to effect the arrangement in a satisfactory manner for less, the demands of the parties or rather of their advisers having been materially influenced by the countenance which the chief local authority had so injudiciously and improperly given to their claims in opposition to the essential interests of government. The rapid increase in the value of property of every description rendered it however indispensable that no time should be lost in fixing the amount of compensation, and having waited the arrival of Mr Crawford and conferred with him on the subject, I lost not time in completing the arrangement which upon the whole seemed most advantageous, and which I trust will meet the approbation of the Governor-General in Council.

*Extract of Letter from Sir T. S. Raffles to the Secretary
to the Supreme Government.*

The information which must be before the Supreme government from Prince of Wales Island, as well as in the reports of the late Mission to Siam, renders it unnecessary that I should enter at any length on the actual condition of the Malay States on the Peninsula, but I have thought it advisable to direct Mr Crawford's attention to the subject, with the view of his keeping the Governor-General in Council regularly advised of the progress or otherwise of the Siamese influence among them.

The conduct and character of the Court of Siam offer no opening for friendly negotiations on the footing on which European States would treat with each other, and require that in our future communications we should rather dictate what we consider to be just and right, than sue for their granting it as an indulgence. I am satisfied that if instead of deferring to them so much as we have done in the case of Quedah, we had maintained a higher tone and declared the country to be under our protection, they would have hesitated to invade that unfortunate territory. Having however been allowed to indulge their rapacity in this instance with impunity, they are encouraged to similar acts towards the other States of the Peninsula, and if not timely checked may be expected in a similar manner to destroy the truly respectable state of Tringanu, on the eastern side of the Peninsula.

The blockade of the Menam river, which could at any time be effected with the cruizers from Singapore, would always bring the Siamese Court to terms as far as concerns the Malay States, and from the arrogant and offensive tone recently assumed by the Siamese, some measure of the kind will I fear ere long become indispensable, unless the possible apprehension of our adopting such a measure may bring them to terms of more accommodation than they have yet shewn.

The only remaining point to which I have directed Mr Crawford's attention, has been the consideration of such measures as

it may be hereafter advantageous to adopt for the more general suppression of piracy in the eastern seas.

I have the honor to be &c.

(Signed) T. S. Raffles,

Singapore, 7th June, 1823.

Civil Establishment for Singapore, from 1st June, 1823.

Resident, J. Crawford, Esq. salary, Spanish dollars	750	
Table Allowance	500	
		1,250

Assistant, Mr S. G. Bonham, Spanish dollars... 300

(All establishments required by the Assistant in his capacity of Registrar, to be provided out of the fees established for that office.)

Establishments.

Malay Translator, Revd. Mr Thomsen.....	30	
Establishment for writers, European, Chinese, Siamese and Malay.....	200	
1. Shroff for the Treasury.....	12	
4. Peons, @ 5 each.....	20	
		262
Master Attendant and Store-keeper, Captain Flint, Salary.....		300

Establishment as Master Attendant.

European Assistant (C. Lec.)....	90	
1 Boat Office Clerk.	50	
1 Boatswain.	20	
2 Peons.	10	
		170

Establishment as Store-keeper.

1 Clerk, Mr Ryan.	75	
2 Weighman @ 6.	12	
1 Shroff.	10	
		97

Three boat's crews and all contingencies in the Master Attendant's Department (the purchase and repair of boats excepted) to be paid by the Master Attendant from the Port Clearance fees allowed to be demanded by that officer.

A writer placed under the orders of the Master Attendant for the purpose of taking a detailed account of Imports and Exports.

Signal Department.	40	
4 Peons @ 6.	24	
Post Master including 2 Peons.	60	
		144

Police Department.

Assistant to the Magistrates, for salary and in lieu of all fees and payments whatever, . . .	200	
Interpreter to the Resident's Court. . .	25	
Ditto to the Magistrates. . .	25	
The detailed Establishment for the Resident's Court and Magistrates to be settled by the Resident, estimated not to exceed 200 dollars per month, and to be in part repaid by fines, fees &c.	200	450
	Spanish Dollars	2,978

Other allowances to be paid from the Civil Department.

Captain Murray, commanding the troops, table money 100 dollars per month, subject to the approbation of the Governor-General in Council.

Mr W. Montgomerie, the allowances of an Assistant Surgeon doing duty at a Political Residency.

Lieutenant Jackson, executive officer, and to assist in the Surveying Department, monthly salary 200 dollars, including Establishment.

Botanical Garden 60 dollars per month, provisionally until the orders of the Supreme government may be received on the subject.

An acting Chaplain 100 dollars per month.

A Clerk at 5 do.

J. Crawford Esq. Resident, to draw an allowance for house-rent of 150 dollars per month, provisionally, and subject to the confirmation of the Governor-General in Council, until a government house shall be authorized to be built.

(Signed) T. S. RAFFLES.

Singapore, 7th June, 1823.

Staff and Military Establishments for Singapore, from 1st June, 1823.

Cantonment Staff.	Rupees	212
Allowance for Commissariat duties.	"	50
Serjeant under the orders of Executive officer.	"	20
Officer Commanding Artillery details, for stationary and repair of arms, the same as at Bencoolen.		32

In addition to the above it has been recommended to the Supreme government, that a Conductor with a suitable establishment, to be paid in Bengal, for the charge of the Magazine and Military Stores, should be sent down. Until the appointment of a

Conductor this duty is to be performed by the officer Commanding Artillery details, on an allowance of 100 rupees per month, and with an establishment of Spanish dollars 173-95, as authorized by General orders.

Application has also been made for an additional Assistant Surgeon to do duty at this station.

The Lieutenant-Governor has further been pleased to authorize Captain Murray to draw a table allowance, as Commanding officer, from 1st June, of 100 dollars per month, subject to the confirmation of the Governor-General in Council, to be paid from the Civil Department.

The detailed establishment and other arrangements for the General Hospital to be fixed by the Resident, on the principle already laid down in general orders, and according to such instructions as may be received from Bengal.

(Signed) T. S. RAFFLES

Singapore, 7th June, 1823.

Extract from a Despatch from the Honorable the Court of Directors, dated 6th April, 1825.

116. We have been much gratified by the information afforded of the flourishing condition of the commerce of Singapore, the value of which in imports and exports amounted in the year 1822 to dollars 8,568,172, and we are happy to perceive that the establishments of this Settlement have been revised with a view to greater efficiency, without any additional expence being entailed on government.

True extract,
GEO. SWINTON,
Secretary to Government.

To G. Swinton, Esquire.

Secretary to Government.

Political Department.

Sir—The Commissioners of the Dutch Government, whose arrival at Malacca I had the honor to report in a former despatch, passed this place about 10 days ago on their way to Rhio.

At Malacca the Commissioners have nearly taken off all port charges and reduced the duties on native vessels to 1 per Cent., an impost, however, still sufficient to prove irksome to the native traders and therefore equal to a direct encouragement to this port. The duty of 25 per cent. imposed on British woollens and cottons at Batavia is by the present arrangement extended to Malacca.

The Dutch commissioners, while at Malacca, invited the rival brother of the Sultan who is connected with us, to come round to Rhio from Tringanu, where he had been residing for several years, and sent a ship of war for his accommodation. This invi-

tation was accepted of, and about three weeks ago the native prince in question arrived at Rhio, where he was put in possession of what are called the regalia, and raised to the Throne of Johore.

The two native chiefs connected with us sent me a messenger yesterday, who had arrived from Johore itself, now a fishing village upon a large river on the Peninsula, 20 miles distant from this place. This person informed me that the newly created Sultan of Johore, in concert with the Dutch, had sent over a party of his own people, accompanied by two Europeans, to hoist his own and the Netherland flag and take possession of Johore as the legitimate prince.

The native chiefs in connection with us, have upon this occasion come forward to claim our active assistance, on the faith of promises alleged to have been made to them. I have declined on the part of government to interfere in this transaction in any respect whatever, and recommended to the parties to rest satisfied in the meantime with the ample allowance which they derive from the bounty of the British government.

The Netherland Government has resolved upon forming an establishment on the large island of Lingin which is a portion of the Johore territory. This will be detrimental to the interests of this place, only in as far as it may obstruct a growing trade in tin from a small island on the Coast of Lingin and dependent upon it, called Singkep. When Singapore was taken possession of on our part, the produce of Singkep in this metal was very inconsiderable, but in consequence of the high prices given at this port, it has since increased so much as at present to be estimated at little less than 5,000 piculs annually.

The activity of the Netherland Government has also been directed to other quarters in our vicinity. They have within the last 12 months formed a Settlement upon the Island of Billiton, which has claims to be considered as a British possession in consequence of a cession from the Sultan of Palembang in the year 1812, sanctioned by the silence of the convention of the Netherland Government of 1814, by which Banca, a cession of the same treaty, was given in exchange for Cochin. I submit this fact with the more confidence, as it chanced to come within the range of my own personal knowledge that the Island of Billiton was actually viewed as a British possession by the British Commissioners who conducted the discussion of the Dutch claims in London, in the year 1820.

The Batavian Government have from all accounts also obtained a cession of the Carimata Islands, which lie between Billiton and Borneo, and where it is said they contemplate forming a Settlement. Should this be effected they will be in an attitude in some respects to controul every navigable channel leading from the Straits of Malacca and the China Sea, to the Java and Amboyna Seas and the Straits of Sunda.

It seems probable that one object at least of the policy in question, is so far to controul the native trade as to give it a direction towards their own ports, and force it out of its present channels. In furtherance of this principle they have indeed already imposed heavy and almost prohibitory duties on all native vessels belonging to their own Settlements which shall trade or even touch at any foreign European ports.

Well authenticated accounts have been received at this place, that the Dutch Government in the month of September last, undertook an expedition for the conquest of Sangau. This is a Malay State situated on the Island of Borneo, about 300 miles up the great river of Pontianak, and in the heart of the country which has of late years produced so much gold. The expedition consists of 8 gun-boats and 400 troops, principally Europeans, and it will require a voyage of two months to take it to its destination, as the ascent of the river is against a rapid stream and very difficult.

It may be worth remarking that Sangau is but one out of eight Malay States of considerable size, scarcely known by name to Europeans, all situated on the same river, which appears to be navigable for native vessels for little less than 1,000 miles.

I have received accounts from Sangora, the first Siamese province bordering on the Malay countries. The person who furnishes me with this information was in the presence of the Rajah of Sangora, on or about the 20th of October, and declares that although rumours were abroad of an intended invasion of Siam by the British, he had not heard a word of any meditated attack on Prince of Wales Island, or even of any preparation making by the Siamese which appeared to have that object in view.

I have &c.

(Signed) J. Crawford,
Resident.

Singapore, 18th November, 1823.

To G. Swinton, Esquire.

Secretary to the Government.

3rd August, 1824.

Sir—In obedience to the instructions contained in your despatch of the 5th of March, and which arrived at this place on the 11th of May, I beg leave to report for the information of the Right Honourable the Governor-General that I lost no time in opening a negotiation with the Sultan and Tumungong for the cession of this island. The result has been the treaty which is herewith transmitted, and which I respectfully submit for the approval and ratification of the Right Honourable the Governor-General.

Upon the different provisions of this convention, I beg to lay before the government the following short comment. The heading and first articles scarcely demand any particular remark. The names of the natives princes are given at full length and their

legitimate titles of Sultan and Tumungong of Johore, under which alone they can be supposed to have power to yield to us the sovereignty of the island, are given to them to the exclusion of more limited designations.

The 2nd, 3rd and 4th articles of the treaty convey to the Honorable East India Company as complete a cession of the sovereignty and property of the Island of Singapore and places adjacent to it, as I could find words to express it in. In framing these conditions I have received the Sultan as possessing the right of paramount dominion, and the Tumungong as not only virtually exercising the powers of government, but being, like other Asiatic Sovereigns, *de facto* the real proprietor of the soil, a principle the more satisfactorily established in the present instance, since the whole ceded territory when it came into our occupation was unreclaimed, in a state of nature and strictly destitute of permanent inhabitants. Government will have the goodness to notice that the cession made is not confined to the main island of Singapore alone, but extends to the seas, Straits and Islets (the latter probably not less than 50 in number), within ten geographical miles of its coasts, not however including any portion of the continent. Our limits will in this manner embrace the Old Straits of Singapore and the important passage of the Rabbit and Coney, the main channel through the Straits of Malacca, and the only convenient one from thence into the China Seas. These extended bounds appear to me to be absolutely necessary towards the military protection of the Settlement, towards our internal security, and towards our safety from the piratical hordes that surround us, against whose incursions and depredations there would be no indemnity if we were not in the occupation of the numerous islets which lie upon the immediate coast of the principal Settlement. Accompanying this despatch, I beg to lay before government an outline Chart of the British Settlement as it will exist after the ratification of the present treaty.

The amount value stipulated to be paid by the East India Company for the cession of Singapore and its Dependencies, it will be seen by the third article of the treaty is nominally sixty thousand Spanish dollars, in ready money, with a pension for life to the native princes of two thousand Spanish dollars per mensem. The real amount of ready money to be paid, however, is considerably short of this sum and is in fact only forty thousand, the difference of twenty thousand being the balance between the sum of eight thousand paid under the original treaty and the higher salary paid under the convention of June 1823, from the period of its signature. This engagement was never ratified, for which reason I have naturally considered the sums heretofore paid on account of it as part and portion of the purchase money now given for the island. Besides this sum of 40,000 Spanish dollars, some contingent expences not exceeding in all 3,500 Sp. dollars and which

will be particularized in a separate dispatch, will be incurred.

The monthly stipends to be paid to the two native princes are the same as under the convention of 1823, viz. two thousand dollars between them. They had been accustomed indeed to the receipt of this large sum during the last twelve months, their expences and establishments had been measured accordingly and there was therefore no possibility of reducing it. Indeed great efforts were made to render this pension hereditary and perpetual, and the steady resistance made to this demand, which had no foundation in any former treaty or promise, formed for a long time the principal obstacle to the success of the negociation.

The 6th and 7th articles leave to their Highnesses the option of quitting the island of Singapore for the purpose of residing permanently within their own dominions. The sum to be paid to them in this case will amount to 35,000 Spanish dollars, and could we disencumber ourselves of them at such a price, I am of opinion that the advantage would be cheaply purchased. The object indeed which I had in view in naming so large a sum was to hold out some inducement to their removal, although, at the same time, considering the repose and security which they at present enjoy, and which the dispositions evinced by them in the progress of this negociation show clearly that they little wish to relinquish, I cannot look to the event as a very probable one. The benefits of this article are purposely made to extend to the heirs and successors of the princes, and with them of course there can be no difficulty in carrying its intentions into effect. One evident advantage to our administration will in the meanwhile attend this stipulation, that it will have a tendency to abate any temporary dissatisfaction which the princes and their followers might otherwise feel disposed to entertain while living under our immediate protection, as the option retiring to their own states without loss or inconvenience will always be within their power.

While on this particular subject I have great satisfaction in being enabled to state for the information of government, that since the receipt of the letters addressed to the Sultan and Tumungong by order of the Right Honorable the Governor-General, a marked and very favorable change has taken place in their conduct. That of the Tumungong in particular, the most influential and intelligent individual of the two, has been highly respectable and steady throughout the whole of the present negociation, and I owe in a great measure to his support such success as I may venture to anticipate as the result of my own efforts.

The 8th, 9th and 10th articles make provision for the political relations which are henceforth to subsist between the native princes and ourselves, while they reside within our territories and are our pensionaries. The stipulation that they shall hold no correspondence with any foreign nation without our especial consent seems equally fair and indispensable. To this article indeed they

were far from offering any objection, for their evident desire throughout was to engage themselves in a close alliance with us, and to render us, if possible, a party offensive as well as defensive to their quarrels. This was a point to be cautiously guarded against, and I have endeavoured to make the necessary provision for such a purpose in the 9th and 10th articles, which secure to the native princes, without putting us to political inconvenience, a personal asylum in case of need and effectually protect us, at the sametime, from the necessity of interfering in their unprofitable quarrels among themselves or their neighbours, as well as from the more serious evil of being committed with Europeans powers through their imprudence.

The 11th article provides for suppression of robbery and piracy. In this matter it is not much that the native princes in connexion with us have in their power, but it is always something at least that they should be bound down to the good conduct of their own immediate dependents, amongst whom there are to be found some depredators of considerable notoriety and the majority always more disposed to plunder than to labour when an opportunity offers.

The 12th article provides against the pernicious practice on the part of the native princes of establishing petty monarchies, towards which a strong propensity always exists. A free intercourse with our immediate vicinity, the whole of which is under their sway, is indispensable to a cheap supply of crude and raw produce, and the necessity of this to the prosperity of the Settlement seemed especially to call for the present stipulation, independant of its justice and propriety on general principles.

In explanation of the 13th article I may observe that possessing the sovereignty and property of the island, the followers and retainers of the princes will of necessity be as completely amenable to such laws as may be established by the sovereign power as any other class of the inhabitants. This right however will require to be exercised with delicacy and discretion. Something similar to the jurisdiction which is conceded to Ambassadors over their families in the international policy of European states, may in general be allowed to the native princes by courtesy, without at the same time permitting their residences to become a sanctuary for criminals of any order or description.

The only concession made upon a subject upon which the native princes were extremely urgent and importunate, the desertion of their retainers, is contained in the same article of the treaty. The class of persons comprehended in this provision are strictly subjects of the native princes, and aliens with respect to us, so that I am in hopes that the stipulation in regard to it, is of a strictly legal character.

I have had the honor, in a former dispatch, of bringing to the notice of the Supreme government the question of slavery as connected with the native princes. I have not permitted the present treaty

to be polluted even by the mention of the subject, I must do the chiefs the justice indeed to say that they did not urge it. Under these favorable circumstances, when the present convention is ratified, slavery may be said to be banished from the island, where its illegality, whether our sovereignty, the condition of our Asiatic Colonists, or of the British settlers be considered, will be as complete as on the soil of Great Britain itself. I have the more satisfaction in making this report, since the practice of introducing slaves had at one time become too common and called for frequent punishment. I have now respectfully to solicit the permission of government to publish a formal denunciation against the practice in question, with an explanation of the state of the law as regards the question of slavery in general.

The 14th and last article annuls all former treaties and conventions, and I have only thought it prudent, chiefly in reference to our connexion with European powers, to make an exception for such rights of occupation as were conferred upon us by the engagements in question.

I have throughout the whole negociation, which is now being brought to a conclusion, carefully warned the native princes and the individuals who are in their confidence that no stipulation of the present treaty could be binding until the whole was duly ratified by the Right Honorable the Governor-General. The whole, therefore, is completely open to alteration and amendment, either in substance or expression, without any compromise of the character of the agent employed in carrying it into effect. I humbly trust, however, from the pains which have been taken both with the English copy and its Malayan version, that no serious revision will be necessary, and that the important objects contemplated by the Right Honorable the Governor-General in Council, in opening the negociation, will be found expressed in the convention with adequate precision and comprehensiveness.

I have &c.

(Signed) J. Crawford,
Resident.

Singapore, 2rd August, 1824.

To A. Sterling, Esquire.

Secretary to the Government.

Fort William.

Sir—I have the honor herewith to transmit a copy in English and Malay of the treaty just concluded with the Sultan and Toomoocongong of Johore, to which the seals of these chiefs are affixed. Much pains have been taken with the Malayan version of the treaty, and I am in hopes it will be found to express with accuracy and sufficient propriety the stipulations of the convention.

I have respectfully to propose, that should the treaty be ratified by the Right Honorable the Governor-General in Council, three

copies of it should be engrossed upon parchment in half margin, leaving a column for the Malayan version, in the manner followed with the copy now submitted. Should these be transmitted with the Governor-General's ratification, the Malay will be added at this place, and one copy will be returned by the first opportunity to Bengal to be deposited among the Records of Government, while the other two will be presented as a mark of attention to their Highnesses the Sultan and Toomoocong.

I have &c.

(Signed) J. CRAWFURD,

Resident.

Singapore, 3rd August, 1824.

To J. Morgan, Esquire.

Sir—The Resident directs me to inform you that he has given the most serious consideration to the whole line of conduct lately pursued by you, and that considering the incompetency of the local rules in existence at this Settlement to afford security against so marked a spirit of insubordination as you have displayed, he has determined upon sending you to Calcutta, by an early opportunity, with a view of placing you at the disposal of the Governor-General in Council, and in a situation where you will be amenable to the authority of regular law.

The Resident directs me further to state to you that this measure has been most reluctantly forced upon him by a consideration of the various outrages committed by you on the persons or property of private individuals,—British as well as native, the insults and contempts offered by you to the local rules for the administration of justice and towards the persons whose duty it is to administer them, your sedulous perseverance in those proceedings after ample time and opportunity have been afforded you for making atonement or offering reparation, and finally by the fact of your being, contrary to law, in the East Indies, that is, without a licence from the Court of Directors, and without the necessary certificate from the Chief Secretary to Government.

The Resident directs me in conclusion to say, that he considers it fair to inform you that he will strongly recommend to the government not to permit your return to Singapore, until a regular administration of justice shall have been established within the Settlement.

I am &c.

(Signed) S. G. BONHAM,

Assistant to the Resident.

Singapore, 10th August, 1824.

To G. Swinton, Esqr.,
Secretary to the Government, Fort William.

1st October, 1824.

Sir,—An authentic copy of the Treaty concluded in London in the month of March last with the government of the Netherlands, having been received at this place, through the medium of the Dutch Official newspaper, I beg respectfully to lay before the Right Hon'ble the Governor-general in Council such observations as are suggested by it, principally in its bearings on the local arrangements recently made with the native chiefs at this place.

By the 10th article of the treaty with the Netherland Government which touches the town and Fort of Malacca, "His Netherland Majesty engages for himself and his subjects never to form any establishment in any part of the Peninsula of Malacca or to conclude any treaty with any in native Prince, chief, or state therein." On the authority of this article—the designations of Sultan and Toomoon-gong of Johore given in the local arrangement to the native chiefs appears to be unquestionable and appropriate.

By the 12th article of that treaty, His Britannic Majesty engages that no British establishment shall be made on the Carimon isles, or the islands of Battan, Bintang, Lingin, or on any of the other islands south of the Straits of Singapore, nor any treaty concluded, by British authority, with the chiefs of those islands. The cession made to us by the native Princes of the main island of Singapore and the islets adjacent to it, to the extent of ten geographical miles from its coast, is in no respect impugned by the condition in question, as by the most liberal interpretation, the whole cession is strictly north of the southern limits of the straits of Singapore.

I beg respectfully to state for the information of the Right Hon'ble the Governor-General in Council, a few doubts which it is probable may arise in the interpretation of the 10th and 12th articles of the treaty with the Netherland Government. By the former the town and Fort of Malacca and its dependencies are ceded to the British Government. At the period of the conclusion of the treaty, the Settlement of Rhio, situated upon the island of Bintang, was strictly and in all respect a dependency of Malacca as in every period of its connexion with the Dutch Government. By this article, therefore, it would become a British possession, but this is again precluded by the 12th article, which provides expressly against any British Settlement being formed on the island of Bintang or any treaty concluded by the British authority with its chief. Under these circumstances the only question is whether the Settlement of Rhio is to be retained or relinquished by the Dutch authorities.

It does not upon the whole appear to me that the occupation of Rhio could be beneficial to the British Government, yet its retention on the part of the Netherland Government, and our exclusion from entering into political relations with the chiefs

of all the islands lying south to the Straits of Singapore and between the Peninsula and Sumatra, may prove a matter of some inconvenience to us, as it in fact virtually amounts to a dismemberment of the principality of Johore, and must thus be productive of some embarrassment and confusion. This may be easily illustrated by an example. The Carimon islands and the Malayan Settlement of Bulang are two of the principal possessions of the Tumungong of Johore or Singapore, and his claim to them is not only allowed by the rival chiefs, but more satisfactorily ascertained by the voluntary and cheerful alliance yielded to him by the inhabitants. By the present treaty, however, he must either forego all claims to these possessions, or removing to them, renounce his connexion with the British Government.

I have &c.

(Signed) J. CRAWFURD,
Resident.

JOURNAL OF AN EXCURSION TO THE NATIVE PROVINCES ON
JAVA IN THE YEAR 1828, DURING THE WAR WITH

DIPO NEGORO.*

5th August, Djocjoharta—This morning I went to see a building called by the Javanese *Taman Sahri*, or the flower garden, and by the Dutch the "Water Castle" situated within the outer wall of the Sultan's palace or *Kraton*.

It was built by Sultan Hamangku Buono II, commonly called Sultan Sepoo or the old Sultan; the work lasted, it is said, thirteen years, and was finished about twenty years ago, (1808).

The principal building, which at some distance looks not very unlike an old castle (whence the Dutch name) stands in a large tank or pond, now dry, and overgrown with weeds, grass &c. This building can only be entered by two low arched galleries or tunnels of brickwork, which were formerly both under water, lighted and aired by small windows pierced in square towers raised above the galleries and the water. The approach is almost a labyrinth, and would be with difficulty discovered by persons unacquainted with it.

There is another lofty building at a short distance, in form like a square tower, which was quite isolated, and could only be entered in a boat when the tank was filled with water. This tower contains three stories or rooms, one above the other, with windows at each side to overlook the grounds, and enjoy the prospect.

In a kind of boat-house by the bank, we saw the remains of a state prow, built something like the tow boats (*trekschuit*) in Holland, with a large cabin; it had once been gaily painted and gilded in Javanese fashion, and was no doubt the Sultan's pleasure boat, used on the tank for fishing, and conveying him to the isolated tower above mentioned, then entirely surrounded by water.

The other and larger building first mentioned, which is entered through tunnels of masonry, formerly covered and concealed by the water, has two stories, each containing long suites of rooms, some few of large size, but mostly small; the roofs are high in the upper story, where there is no ceiling: the doors and windows small according to Javanese custom, all the latter provided with solid bars; the walls are very thick; the woodwork was originally carved, gilded and painted in Javanese taste, but is now all tarnished, defaced and decaying.

In various parts of the building, some of the rooms still contain Javanese beds or couches, and close to some of those are bathing places, communicating formerly, I suppose, with the tank, but enclosed by high walls; in one of these baths some very clear water, from a subterranean spring probably, still oozed through

* Continued from page 246.

the broken flooring of brickworks; there were separate fountains and fishponds also, all which are now dry.

Another tower of minor elevation and circular form, contains an arched stone passage all round and in the centre a fish pond.

There are many other smaller buildings, some of fanciful forms, gateways, walls, and flights of steps without number, and a great deal of ornamental, but seemingly useless brickwork, in and about the gardens, including large vases or tubs of solid masonry for shrubs and flowering planks.

There seem to have been two chief objects proposed in the plan of this extraordinary edifice, security from intrusion from without, and sensual enjoyment within—this answers to the character of the builder, who was a selfish, tyrannical and luxurious prince.

The Sultan used to retire frequently to this place, with his numerous concubines, and admit no one but his most trusted adherents and followers. Even the European Resident was not allowed to enter the Water Castle itself, but was received by the Sultan in an open Pendopo on the other side of the tank.

The building and laying out of this fantastic retreat would have cost an immense sum, had it been paid for, but the old Sultan went a cheaper way to work, according to the ancient usage of Javanese sovereigns. He divided the buildings, gardens and aqueducts into several portions, and allotted these to the regents or chiefs of the various provinces then belonging to Djocjokarta, who were obliged to furnish all the materials and workmen without payment, each for his respective share. In the same manner the Sultan caused, it is said, about a dozen other pleasure houses to be built in different places, at various distances from the capital of his kingdom. The burthen of all those works of course fell, ultimately, upon the bulk of the population, which from time immemorial has been oppressed and impoverished, to feed the luxury and extravagance of their sovereigns and chiefs, who consider their subjects, *bona fide*, as only made to provide for their subsistence and gratification.

While the Taman Sahri was erecting, however, the territory of Djocjokarta was much more extensive, and its population much more numerous than they are now; several wide and rich provinces having since been ceded to the European authority.

The old Sultan did not long enjoy this luxurious and favorite retirement after its completion in 1808, for in 1812, having formed a conspiracy against the English Government, then recently established on Java, the Kraton or palace of Djocjokarta was taken by assault, by the troops under General Gillespie, and the Sultan was made prisoner and deposed. (He was afterwards banished to Pulo Pinang, I believe, but sent back in 1816 to Batavia, and thence by the Dutch Commissioners General, to Amboyna).*

* Sultan Sepoo was re-instated on the throne in his old age, (I think about two years ago) by the government, in the hope that his influence would be useful in quelling the insurrection, but this hope was never realised.

His son and successor Hamangku Buono III, died after a short reign, leaving an heir in childhood, who also died soon after attaining his majority in 1822, either by poison or apoplexy; his son, the fifth and present Sultan, is still a minor, and under guardianship as before stated.

This unsettled state of the government, added to the loss of territory and wealth after the events of 1812, and more recently the present disturbances, have no doubt caused this princely retreat to be abandoned and neglected; very little care, if any, seems to have been bestowed upon its preservation; the buildings are mostly in great want of repair, some of them already beginning to decay; flights of bats and other birds are their only tenants, the gardens are destroyed and overrun with rank vegetation, the tank, ponds and baths devoid of water, giving the whole a ruinous and melancholy aspect. Sic transit gloria mundi!

6th August, *Djocjokarta*—This morning we went to a large and populous village about three miles and a half from *Djocjokarta*, in an easterly direction, where is the royal place of interment.

We left the fort before six o'clock on horseback; the party consisted of the Resident, secretary, Javanese interpreter and myself with four or five attendants.

Almost immediately, we found ourselves in a scene of desolation, presenting a sad picture of the evils of war.

Our road lay chiefly through rice fields, now uncultivated, and among the ruins of villages that have been burnt, plundered and deserted. In many places the remains of large brick houses, walls, and gateways to the gardens that once flourished around them, shew that the former inhabitants were in easy if not in affluent circumstances. Some of these were Europeans or their descendants.

In a few spots, we saw small groups of Javanese ploughing and working in the fields near the ruined Dessas (Javanese villages). This is only the case, I was told, within the last month. Many of the peasantry who deserted, or were driven from their homes since the insurrection commenced, cannot resume their agricultural labours if they were so disposed, for although they are allowed to return to their villages and fields without injury, and mostly even without enquiry as to their having taken part with the rebels or not, they have lost their cattle and implements of husbandary during the war, and far from being able to purchase others, and provide themselves with seed for a fresh planting, they have not wherewithal to buy food for their families.

On approaching the Dessa or village, which is called Passar Gedeh or the great market,—there is a ravine with a little stream winding through it, enclosed by high banks. This spot is partly wild and partly cultivated; it reminded me of the scenery

in the interior of Sumatra, which in general however is much finer than that of this part of Java.

This village, unlike most of those around it, has increased in population, during the war. This is owing to its greater capability of defence, and to its having been a military station of the Europeans, for a length of time; there is still a respectable benting or stockade remaining, garrisoned by a Lieutenant and some European soldiers, and outside of this, the temporary buildings occupied by the troops are still standing.

Beyond the village, is a large space enclosed by a high stone wall, where formerly stood the Kraton or Palace of a Prince named Panumbahan Senopati, traces of which are apparent; these stones are let into each other by grooves and mortices, something like those in the Hindu Temples; the wall is in general in good preservation; there are some fine venerable old Waringin trees within the enclosure. Outside of it, at the entrance, we found a large slab of smooth dark blue stone of an oblong-square form, about $4\frac{1}{2}$ feet long and $3\frac{1}{2}$ wide, on which are engraved in roman characters several sentences, in Latin, French, Italian and Dutch, respecting which the chief of the village, who accompanied us, could give no explanation, at least none that seemed likely to be true. Among these matters were the following, *nediti, ignari, et ridete—ainsi va le monde* (in the 4 languages) *vide, lege, ino—ad æternam memoriam sortis infelicitis. Quid stueparis insani contemnitis vos contemtu veri diñni*, and some others which I could not make out; near the middle of the stone, were the letters I. G. M., seemingly the initials of a name, and in the four corners the date of 1769, I think, in roman initials. The stone is raised on a kind of basement of smaller stones. By some the engraving is ascribed to an European, made prisoner by the Javanese during the war which led to the dismemberment of the native empire, but this war ended in 1755. Another legend runs, that the stone was found on the sea beach on the south coast, with two Portuguese, survivors of a shipwreck, who were seized by the Javanese, and chained to the stone their whole lives at the prince's gate.

The royal burying ground is enclosed by high walls of brick-work, ornamented with detached sculptures in stone, representing flowers &c, probably taken from the Hindu temples and inserted in the walls while building—after passing the outer court, in which are a Pendopo and Waringin trees, a flight of steps leads up to the doorway, which is very small—so much so, that when the old Sultan Sepoo was brought here for internment, it was found impossible to get the coffin through one of the doors, and they were obliged to unpack it on the spot, and deprive the body of some of its appendages, before they could introduce it within the enclosure—it did not occur, it seems, to those charged with the funeral ceremonies, to measure the width of the door, and compare it

with that of the coffin. The Resident's dogs, who had followed us from the fort, were not allowed to enter the burying ground.

The doorways are surmounted by an immense mass of ornamental brickwork, out of all proportion with the door itself, and which being badly put together has lost its equilibrium, and has begun to fall in, threatening ere long to come down altogether, unless speedily and completely restored—the door posts and leaves are neatly carved, but not painted.

There are several enclosures, within the external wall, planted thick with flowering trees and shrubs, under which the graves are placed, very near to, but not touching each other; each is covered with a raised tomb or tablet of free stone, neatly cut and constructed, but not engraved or sculptured, except in some instances a little at the head and foot posts—many of these stone tombs are small, being those of children of the Sultans and their families; the ground is strewn with the leaves and flowers that fall from the trees above, otherwise kept clean and free from weeds, as well as the tombs themselves. Above a new made grave, over which the stone was not yet erected, but where some traces of the usual religious offerings remained, I observed a large payong, (paper umbrella or sunshade) the colour of which designated the rank of Tumungong; this was the grave of a wife of Wiro Negoro, Commandant of the Sultan's household troops, who has the rank and wears the uniform of a Lieutenant-Colonel. These payongs are generally left to stand a twelvemonth over the grave, and are a mark of respect to the persons they cover.

The graves of the Sultan and his immediate connections are covered with a large shed or Pendopo of similar form as those in the Kraton, but with a lower roof; over some of the graves is suspended a kind of canopy, like the valance and curtains of a bed, of white cotton; over others were Payongs, that of Sultan Sepoo had two large gilt ones above it, (he died in October last) and near it several articles which he used during his life, as a large library chair of split rattan, apparently of Bengal or China manufacture, a siri stand and appendages, a gold headed walking cane, and a large rosewater bottle &c.

Among the other graves under this Pendopo, was that of Panumbahan Senopai before mentioned.

There are two bathing places, probably for the priests attending the graves, connected with which are fish ponds, all within the enclosure; in these the water is quite clear, and we saw the fish sporting about, some of them very large—these fish are held sacred, they are regularly fed, and may never be caught; when they die, they are taken out of the water and solemnly buried in a spot adjacent, which is reserved for that purpose.

This royal burying-ground was frequently visited before the war by Prince Dipo Negoro, on foot and *incognito*, for the purposes of meditation and prayer only, as he afterwards declared.

This is however known to be the custom among Javanese princes and chiefs, when they have it in contemplation to excite disturbances or raise the banner of revolt. On these occasions an appearance of devotion and religious observance—sometimes, perhaps, a little genuine fanaticism, have been found of powerful influence over the ignorant and superstitious Javanese, who thereby become willing tools in working out the immediate objects of the discontented nobles.

7th August, Djocjokarta—This morning before breakfast, I visited the military hospital, with my old acquaintance Surgeon B.... who is here the chief medical officer; the greater number of patients are in the old residency house outside the fort and facing it. This large building, however, has not been found large enough to accommodate all of them, and temporary lodgings of bamboo and straw have been constructed near it for the remainder; some are also in the old hospital within the fort. The number of sick, wounded, invalids and convalescent doing duty at Djocjokarta is at present about 900 men altogether, of whom about half are Europeans, but this includes the native troops and auxiliaries. My friend B.... says, he is very fortunate, that the deaths are few in number, and that he has not lost one officer for many months; his predecessor was not so fortunate, or perhaps less skilful. I took but a hasty view of the sick, for a hospital is a melancholy and disagreeable sight, especially in the seat of war; the present one seemed as well managed and provided, as is perhaps possible under the circumstances of the time and place, but not so well as I could wish for the comfort of the sick. For instance, some of the temporary rooms had very low roofs, which must make them warm, and were not floored, but exhibited the bare earth, under the cribs of the patients; in others the doors and windows were defectively closed and so forth. The wounded in the frequent actions at a distance are said to have suffered much, and sometimes died on their way to the hospitals, for want of proper litters, or conveniences for conveying them. Of course a great number of these were required, and they were not always procurable.

In the infirmary at Magelan (Residency Kadu) 20 European soldiers died lately, I was told, in the time of two days; this was considered a very *unusual casualty*,—nevertheless, the army is said to have lost 3,000 Europeans during the year 1827; by far the greater part of these fell victims to disease, brought on by excessive fatigue and privations in a tropical climate.

This afternoon, I accompanied the Resident and Secretary on horseback to the Palace of Prince Paku Alam, where we were received by the prince's eldest son and his wife, a daughter of Sultan Sepoo, with whom as usual we had to drink weak warm tea, without milk, and eat fruit and cakes; we afterwards rode through the grounds and inspected the spot where the Resident's

new house is to be built as a temporary abode; which the prince's people are occupied in partly clearing away, in order to mark out the site of the house. It will stand in a pretty situation, and be a much pleasanter abode than that in the Fort, which being surrounded by buildings, is dark and close and has no view whatever.

The Pangerang Adipati or Prince Paku Alam, (which name or title may be translated axis of the world) is independant of the Sultan of Djocjokarta, though belonging to the same family, and only subject to the European authority.

A small territory, taken from the Sultan's, has been allotted to him, in reward for former services under the English, in the year 1812, on condition of his maintaining a certain number of armed men, at the disposal of the European government when required. He is a faithful vassal and respectable chief; his troops have frequently done good service during the war, in conjunction with ours. The subjects of Prince Paku Alam, are now estimated at about 30,000 souls, inhabiting the southern districts.

8th August, *Djocjokarta*—Took a walk before breakfast to the nearest Benting or Stockade, forming one of our advanced posts, being about $\frac{1}{2}$ of a mile from the Fort; it is a small one, and now occupied by ten men only, it is built near and commands a ravine, in the direction of the enemy, all around it is ruin and jungle, and the tall thin stems of the numerous cocoanut trees, that have been robbed of their tops, recall to one's mind the masts of vessels in a seaport or river.

In the afternoon, while taking a short walk as usual, we heard a continued firing of musquetry, and saw clouds of smoke in the same direction, at no great distance. The military commandant, who was with us, judged it to proceed from a village about 4 miles off, which lately submitted to government, and was probably attacked by a band of the insurgents; the inhabitants seemed to defend themselves well, for the firing was rapid and kept up till it was nearly dark; the smoke probably rose, not only from firing, but from the burning dwellings of the villagers.

The commandant determined to proceed to the spot early to-morrow morning, with a detachment of military, it being too late to reach it before nightfall.

9th August, *Djocjokarta*—The Commandant Colonel C. had set out before daylight, with about 100 infantry and 10 cavalry, to reconnoitre in the neighbourhood of the firing we heard yesterday evening, with the intention, also, of defending Passar Godé (the village, I visited on the 6th) in case it should be threatened by the insurgents, as he seemed to apprehend.

Djocjokarta is distant about 450 paals* from Batavia, 93 paals from the Northern Coast of Java, (Semarang) and 15 from the

* A Paal is generally considered equal to an English mile, but is somewhat less. there may be 15 miles in 16 of these paals.

nearest point of the Southern Coast. It was built on the site of the ancient capital of Mataram, or very near it, in a plain bounded to the E. and S. by the Goenong Kidul or Southern hills, to the W. by the river Progo. Of the Javanese town, or rather circumjacent villages, round the Kraton, scarcely anything now remains but ruins, having been destroyed 3 years ago, in the commencement of these disturbances, or soon afterwards. The population was estimated, previous to then, at nearly 100,000 souls, of which but a small part now remains.

The place appears to have been laid out, originally, with great attention to order and neatness; there are brick water courses and obelisks, and huts, where water was placed to refresh the weary travellers, in different parts along the road.

The Kraton is larger, and seems to have been handsomer and better built than that of Solo, the external wall is said to be nearly three miles in extent, including that of the water palace. In these walls are inserted a number of stones with Javanese inscriptions, and underneath these is generally seen a Hindu idol, or other stone figures brought from the ruined temples. The state Pendopo was very handsomely ornamented with painting, gilding and carved work; in general, however, the palace is now in bad condition and requires repair in many places.

In this Pendopo, the Resident passed 23 days and nights, after the death of the old Sultan, and before the installation of the present one, in the early part of this year, in order to secure the latter from any violence, or attempt to carry him off, on the part of the rebel chiefs or their agents, which at one time they were known to have in view, a plan of this kind having been discovered and frustrated, and also to make himself acquainted with the character and intrigues of the royal family and princes connected with the Court of Djoejakarta.

The Fort is, like that of Solo, a regular square, with bastions and sentry boxes, at each corner. Each bastion has 10 embrasures for cannon, so that 40 guns can be mounted on the walls, besides two at each gate; at present there are about half that number; the Fort is filled with buildings, among which the residency house and offices attached to it occupy nearly one whole side of the square. There are quarters for the commandant of the Fort, for officers of cavalry and artillery, the Surgeon &c., barracks for 400 men, stabling for cavalry, warehouses, hospital, main guard, powder magazine, all of bricks and sirap.* There is a broad and deep ditch all round the Fort, with a drawbridge in the centre of each side, communicating with the principal and postern gates. The open space in the centre of the Fort is planted with 2 rows of fine large trees, which give a pleasant shade and coolness in the daytime, but render it gloomy and close in the evening.

* Wooden shingles.

The Fort stands in a large plain, and round it are stately avenues of Banyan (*Waringin*) trees at three sides, with walks wider than the great Mall in St James' Park. These beautiful trees throw a pleasant cool shade on the walk beneath, so that one feels but little inconvenience from the sun, even at noon. Under and behind these trees a daily market is held, and most numerously attended;—besides food of all descriptions for the native and European inhabitants, fruit, spices, &c. are here seen exposed for sale, clothing for both sexes, old as well as new krisses and other weapons, earthenware, &c. &c.; there was even a manufactory of sheaths and handles for spears and krisses, the workmen, as usual, seated on the ground, with their tools before them, stuck in the sand or lying on a piece of mat. One man's work was to cover the sheaths with a coat of varnish, of red, black, green or yellow color; each varnish formed a lump on a bamboo stick, stuck in the ground; the outershell of a cocoanut or any wood that lay about, supplied the fire over which the varnish was melted and a piece of cocoanut leaf was used to smoothen and polish it on the sheaths. These were made and mended by another man, seated close by, with equally simple tools. His feet served as a vice to secure the sheath he worked on, one end of which was stuck in the sand.

Opposite the front gate of the Fort, stood the former residency house and offices, which was a grand and complete establishment, erected, I believe, about 1770, in the rich times of the Old Company; this was partly pulled down, to be rebuilt, a short time before the troubles broke out, and the walls of several new rooms were already erected, when the King's order to put a stop to all public works during the war arrived from Europe, and the building was left in the unfinished state we now see, and subsequently turned into an hospital for the military. There was a large piece of garden ground attached to it, with two tanks or pieces of water in front, in each of which stood a kind of summer house; one of these is now converted into the apothecary's house and shop.

The other conspicuous objects in the immediate neighbourhood of the Fort are:

1. The European burying-ground, enclosed by a wall of open brick work.

2. The houses of the Europeans and their descendants, in one straight line fronting the Fort, with several small streets or courts proceeding from it at right angles. These houses are almost universally shut out from the road by a high wall, which excludes impertinent curiosity, it is true, but also excludes the air and light, from the inhabitants.

Some of these edifices are large, and seem well built, but not handsome, chiefly in the old style, with small square windows, &c.; they are all of brick and roofed with sirap or shingles.

3. The Chinese camp, consisting of two streets or rows of houses, at opposite sides of the Fort, built of the same materials, and much in the same style, as the above. The Chinese at Djocjokarta were formerly numerous and wealthy, but since they have been deprived by government of the management of the bazar and toll dues, on account of the extortion they practised among the natives, and especially since the war, to which many of them have fallen victims, this part of the population has considerably diminished in number and in property; their Chief, or Captain as Europeans style him, has a Javenese title of nobility, Tumungong Secho Diningrat, in reward, probably, for pecuniary services to one of the former Sultans.

4. The Kraton or royal dwelling with all its dependencies, which has been briefly described already.

5. The Dalam, or dwelling of the independent Prince Paku Alam, is at some distance from the Fort, on the opposite side of the river, and to the right of the high road on entering Djocjokarta,—this has also been mentioned before (see 2nd August).

The European born inhabitants of Djocjokarta, consisting almost wholly of military and civil officers of government, have established among themselves a Societeit or club-house, where they generally pass their evenings; here is a billiard table, and cards are also sometimes played, but the favorite game, at least during my stay, was that of dominoes. Tea and coffee, and liquors of various kinds, may also be had there, though at rather high prices.

This is applicable to almost every article of consumption, on account of the war, which, while it has considerably augmented the number of consumers, the military and their followers, has diminished the consumable produce of the country, in a still greater proportion, has deterred traders from risking their persons and property and entering into competition with each other, and at the same time enhances the difficulty and expence of conveyance. There is no water carriage, nor any land carriage except the government bullock carts; the packhorses and coolies it is difficult to procure, they being mostly pressed for the public service.

Owing to these circumstances a case of red wine, containing 50 bottles, which may be had at Batavia of good quality for 40 guilders or often less, here costs, where it is generally bad, about twice as much and other things are in proportion. This must add greatly to the expences of an household at Djocjokarta, and if the Resident were to live in the liberal style which was formerly thought proper, for the dignity of those he represents, I question whether his salary of 1,500 rupees a month (£125) would cover the necessary expenditure of his establishment, but economy is now the order of the day at head quarters, and it is natural that the local officers and authorities should imitate the example; in fact this is rendered unavoidable, if they wish to avoid getting into

debt. I believe, however, that the Resident has now something extra as table money.

The government revenues in this residency before the war amounted to nearly f800,000 annually (about £66,000 sterling) out of which f250,000 was paid to the Native Sovereign, according to the treaty of 1812, for the duties on tolls and bazars, which he then gave up entirely to government, under the administration of Sir T. S. Raffles.

Besides the above sum, which was collected here, must be added the value of the bird's nests from Karang Bollong, which were sent to Batavia for sale;—this may be estimated at a yearly average of not less than f200,000.

Nearly the whole of these sources are now unproductive, and the funds required for the payment of the troops, civil establishment, the Sultan's stipend, and other disbursements, must be sent from Batavia or Samarang in silver and copper coin, with the risk of being intercepted by the rebels.

My notices of Djocjokarta and the environs must necessarily be very scanty, from the peculiar state of the place during my short stay at it. To go even a short distance from the Fort, without an armed escort, was considered unsafe, and the vicinity is so changed in appearance by the devastating effects of a three years war, from what it must have been formerly, that no just criterion can be formed from present circumstances.

10th August, Djocjokarta to Klattan—Took leave of the Resident at 6 this morning, and set out on my return to Solo, on horseback. I was accompanied by the Secretary, as far as the Stockade of Bantoelan, about 3 miles from Djocjo. The Resident had kindly furnished me with an escort of 4 native horsemen, as some parts of the high road are not yet considered quite safe for single travellers. On leaving Bantoelan, our party was joined by a female equestrian, the wife of a Madura Serjeant, going to rejoin her husband at Klattan; this woman, like the Javanese females in general, rode on a man's saddle, astride the back of the horse, which she managed very well while chattering and laughing the whole time with my escort.

Soon after we met another of the fair sex, on horseback, in the same manner; this was a Liplap as the Dutch say, or half caste, the Lady of the officer commanding the Stockade of Kulassan, who was going to Djocjo. Her dress would be considered a singular riding equipment in England. She had on a small straw bonnet, tied under her chin with a pink ribbon; an open frock of printed cotton; over her neck was a pink silk handkerchief; her frock was tucked up before and behind, and under it she had white trowsers and stockings and pink shoes. She did not seem so much at her ease in this position as the Serjeant's wife.

I stopped a short time at Kulassan, while the relief of my natives dragoons were preparing, to look at some stone figures,

which the former Chinese inhabitants brought from the adjacent temples. There are two whole sitting figures, of Buddah, I believe, and one female holding a flower, with a high head dress, elegantly sculptured and ornamented; there is also a group of 3 small figures, much mutilated. These are outside the wall, at the entrance to the Benteng. Inside there are 2 figures of Giant guards or watchmen, like those at Chandi Sewo but smaller; they may be about 3½ feet high, kneeling on one knee, with a snake winding round the arm in one hand, and a short club or mace, on which they seem to rest, in the other. The countenance is quite different from that of the porters of Chandi Sewo, still more unlike the Javanese, and with 2 long teeth or rather tusks projecting outside of the lips, the eyeballs very prominent, the hair in long curls flowing down the neck. These figures are very broad for their height; there are two others similar, but much smaller, and not so well proportioned; these are more defaced. I am told that some other figures which stood in the way, and were too heavy to remove, have been buried under ground, when the stockade was built.

I then took another hasty view of the ruined temple, from whence these images were brought, which is on the opposite side of the road, and a few hundred yards distant from the Benteng. The principal doorway, which opens to the centre of the building, is at the back, from the road, and looks towards the southern hills. This portal is quite plain, in which it differs from the generality of doors in these temples; they are always more or less sculptured, and generally crowned by monstrous faces, with staring eyes, and large nose and teeth; the upper jaw forming the cross piece of the door. There are two other doors much smaller, at the E. and W. sides, leading into the lateral chapels or cells, which have no other opening and are dark within, though there appears to be an aperture in the roof or tower above, communicating with the central temple.

I regretted very much that I was not of the party that visited these ruins 15 years ago, with the then Lieutenant-Governor Raffles, who had caused them to be cleared of stones, bushes and rubbish, which now deprive me of an exact view of them. Besides which, they were then much more perfect and interesting than now; for independent of the damage done by time and the elements, almost all the moveable images have been carried away, by successive collectors, and many of the remainder have been mutilated, in ineffectual attempts to remove them.

August 10th—I arrived at the cantonment of Brambanan in time for breakfast, to which the officers remaining there invited me, and stayed with them till ½ past 11, when I proceeded on my journey in a kind palankeen, here called joly, borne on the shoulders of 4 men; this vehicle was made of wood and split-rattan work, open all round, with a shed or sloping roof to keep off the

sun. It was just long enough for me to lay at length, and was provided with pillows.

In this conveyance I was carried at a walking pace, with a rather unpleasant motion, my bearers every now and then shifting the bambu poles that supported the tandu or joly, from one shoulder to the other. This mode of travelling, however, for an indifferent equestrian like me, is to be preferred to riding on horse-back, for a distance, especially in the heat of the day and with such sorry steeds as are here to be hired, under the denomination of *Koeda aloos*. I slept over a part of the road, which shortened the journey, and arrived at Klattan about 3 o'clock. The distance is only ten miles from Brambanan, but my bearers frequently stopped a few minutes to rest and refresh themselves with some of the delicacies exposed for sale in the sheds at the roadside, by numerous female dealers. I think this mode of travelling would not be agreeable for any considerable distance, though something similar to it, as I have heard, is adopted in Hindustan for hundreds of miles.

Very little cultivation or traffic is seen along the road, until within 3 or 4 miles of Klattan, and almost every man we met was armed with gun, pistol, spear or sabre, besides the inseparable kris. This is too sure an indication of the unsettled state of the country.

Klattan to Solo. 11th August—Breakfasted in the Fort, with a large party of officers, some of which had assembled from the Bentings and forts in the adjacent districts, to be present at an auction, which took place in the forenoon, of the property of an officer who died here lately; it consisted of his 2 horses, and their equipments, his clothing, uniform, arms and various trifles, and produced altogether, nominally, £720 or sixty pounds sterling, but two thirds of which is payable in copper coin, at a depreciation of nearly 20 per cent., besides the auction duty of 6 per cent., so that the sale proceeds will not go far to enrich the heir, a natural child of the deceased, by a native mother.

At 3 o'clock in the afternoon I left Klattan, in a buggy or gig, with Captain S. who had come from Solo to attend the auction, as well as to carry me back. About 4 we reached the stockade of Dilangu, where we stopped to dine with the commandant and his lady, changed the horse and proceeded towards Solo, where we arrived at 7 o'clock without accident.

The Colonel and Mrs N. were from home, and my room was occupied by another guest; I accordingly took a room at the inn, close by, for the night and retired early.

Solo, 12th August—Early this morning the Resident called on me at the inn, and informed me that a room would be prepared for me in the residency house, whether I proceeded accordingly at breakfast time and remained.

Three English gentlemen who arrived at Solo this morning, on

a tour of amusement, dined at the Resident's to-day and a party, of which I am to make one, was arranged for an excursion to Karang Pandang, the country retreat of Prince Mangko Negoro, and Sukie, not far from it, where some antiquities are to be seen. We are to go the day after to-morrow, early in the morning, and return the following afternoon to Solo.

14th August—We left Solo this morning, a little before six o'clock, in an open carriage, like the Char-a-bancs in Holland, with six horses and proceeded through the Chinese town, to the eastward; our party consisted of 2 Englishmen, 2 Scotchmen and a Frenchman. At about 4 miles from the residency, we had to cross the Bengawan or Solo river, which is here broad, but not deep at present, this being the dryest season of the year. In the rainy months, boats of 150 tons and upwards can sometimes navigate it. The salt for use in this part of the country is conveyed in this way from the coast out of the government stores at Grissel. The voyage to Solo occupies two months or longer, owing to the strong current downward, and the numerous shallows and banks of mud and sand. The horses were taken from the carriage, which was placed on a kind of raft, consisting of a bambu flooring, laid upon large boats connected together, and pulled across the river by a number of men. We used the same conveyance, and the horses were led across. The operation of crossing the river in this way took us nearly half an hour. How great an improvement a suspension bridge would be here! The country on each side of the road from Solo to the river, seems but scantily supplied with water, for there is now very little cultivation going on; a crop of rice appeared to have been grown here and there in the last rainy season. Beyond the river, the ground is more fertile, or at least more cultivated, and this increases as you proceed eastward. The road is on a gradual ascent; the rivers that cross it are not numerous, the bridges are of wood and in tolerable condition.

We changed horses once, and arrived in about an hour and three quarters at Karang Anjar, from whence we were to proceed on horseback. This is a post station, and also a bandar, or toll-post, for the levying of inland duties upon merchandize conveyed through the county. Here we found a kind of breakfast, prepared for us in the Javanese and Chinese style, of which we partook sparingly, and then mounted our rosinantes, with saddles and bridles of Javanese manufacture; we rode on leisurely, attended by some of the people of Prince Mangko Negoro, by whose order all these preparations had been made for our convenience. The distance from Solo to Karang Pandang is just 19 paals and Karang Anjar, where we left the carriage, is half way; we had therefore 9½ paals to ride, the road was in a good condition, and passable for carriages; the prince's son, who had preceded us yesterday, travelled the whole way in his buggy. The fields on each side,

are mostly in a state of cultivation, some with a second crop of rice, others with the annual cotton shrub, palma Christi, here called Jarah (from which castor-oil is made), Ketang, beans of various kinds &c.

It was pleasing to observe no such signs of war as strike the traveller's eye in the neighbourhood of Djocjokarta. On approaching Karang Pandang, the country becomes hilly and picturesque, the road ascends considerably, and the air is sensibly cooler than in the plain about Solo. The Prince's house is visible from some distance on the top of a hill. At the bottom is a bazaar, from which the road winds up; we arrived about half past nine, and were received by Pangerang Panji, a son of the Prince, and Captain in his cavalry, whom he had sent up yesterday, to receive us and do the honors as his representative.

The situation of Karang Pandang is extremely beautiful, and commands a most extensive panoramic prospect in front, over the great plain of Solo, the buildings of which may be seen in clear weather, and behind on the mountain Lawu beyond the numerous smaller hills, that form and surround its base, and approach close to the house; on one of these may be seen the ruins of Sukie, which are among the objects of our present trip; the air is here pleasantly cool, from the considerable eminence on which the building stands (more than 2,000 feet above the sea). It is very conveniently planned for the purpose of a country residence; there is a very large Pendopo, or open hall on one side, and a verandah all round, with two wings containing 7 or 8 bedrooms, divided by a wide open passage, all under one roof; the bedrooms are provided with folding glass windows, and venetians outside along two of their sides, so that the occupant can enjoy the charming views around, and admit or exclude as much air and light as he chooses.

This building is appropriated to European visitors and guests; there is another at a small distance, arranged more in the native manner, for the Prince himself and his suite.

It is now ten years since the first buildings were erected on this spot by Prince Mangko Negoro, they were then only of a temporary nature. The present ones were finished in 1823. The choice of the site does honour to his taste, for the landscape all around the house is charming and diversified, and the arrangement and plan of the building itself appears to combine the double advantage of enjoying the beauties of nature in an agreeable and convenient dwelling.

The air of the hills and our journey, enabled us to do justice to a substantial *déjeuner à la fourchette*, which was served about 11 o'clock; in smoking a cigar, admiring the splendid scenery round the house, changing our dress and resting ourselves, we managed tolerably well to fill up the time till three o'clock. We now again set forth on horseback, to visit some mineral springs in the neighbourhood; after a beautiful ride of about 3 miles between

hills of minor elevation, many of them covered with rice and other crops, of vivid green, we arrived at a kind of dell or ravine, in which are some large rocks; at the foot of one of these, and apparently issuing from it, is the first spring, called Ayer Rachoon, or the poisonous water; it is enclosed in a wooden well, and covered with a kind of platform of plaited bambu; on this platform a small fowl was placed on its legs; it instantly became giddy and fell, when it was taken out, but died almost immediately. It could not have been 5 seconds above the spring. Large lighted candles were held over it, and were instantaneously extinguished, as was also a large flambeau of split bambu.

We walked on a few yards further to another spring, possessing the same qualities, but in a stronger degree; the well was here closely shut down with a lid or cover of plank; a candle applied to the fissure of this, went out immediately; when the cover was taken off, a powerful smell was perceptible; we were warned not to lean over the well, by an old Javanese who is in charge over these springs and surrounding domain, and who told us that eight of the workmen who had made this well under his inspection, lost their lives, by the pestilent exhalations. I was afterwards told by another, that this was not the case; the men really became insensible and were sometime ill, but were restored to health subsequently.

A fine large duck was placed on the platform, above the water within the well, it became convulsed in a few seconds, and was taken out, when it appeared nearly dead. They saved its life, however, by taking it into the open air, and pouring water down its throat. A poor little kid was also tied up, ready to be exposed to the fatal operation of these deadly waters, but I could not bear to see the pretty playful thing wantonly tortured and perhaps killed for our amusement, and begged the prince to spare its life, as we had had already sufficient proof of the extraordinary powers of the fatal spring.

On lifting up the wooden cover from the well, the water appeared in a state of ebullition, but not steaming, and of a dingy blueish colour.

To our surprise the old Javanese guardian of the springs filled a glass tumbler with this water and drank half its contents off at once. Encouraged by his example, and assurances of the water's being harmless, some of our party tasted it also, and I among the rest; the water was not warm, neither was it cold, but something between both; the taste was sickly, and the smell sulphureous.

By breathing the air immediately above the well a sensation is at first produced something like that caused by inhaling *eau de luce*, but in a stronger degree; the chest then becomes oppressed and respiration is soon impeded; perhaps the gas (probably carbonic acid) that exudes through small fissures in the sides of the well, is the cause of this and infects or decomposes the atmospheric air above the well.

This well was in a kind of niche or alcove, which has been hollowed out of the stony bank, and the old guardian warned us not to walk round the well as we were going to do, this being considered dangerous; (probably some native superstition.)

We again mounted our ponies, and rode about half a mile further to a spot nearly level around, in which are twelve or thirteen springs of mineral waters, of different kinds, within a very small circuit or distance from each other. None of these possess the fatal qualities of those we had just left; some of them have been converted into baths of a convenient size, with steps to descend and a temporary roof above them.

In some of these springs the water is more or less warm, in others rather salt; one or two have some resemblance to seltzer water, many of them seemed impregnated with iron. They are sometimes resorted to by patients, especially those suffering under chronic rheumatic disorders, and are used both internally and externally, often with favorable effects.

The present collection of springs is called by the natives Ayer Rupa or the various waters, they were discovered about twelve years ago, or rather they became known at that time to Prince Mangko Negoro. The ground around them has on the surface a greenish and in some places a yellowish mud, with pebbles and stones of similar colour and of peculiar form.

Here, as on many previous occasions, I regretted my ignorance of geology; an acquaintance with it would no doubt have greatly added to the interest excited by this remarkable spot.

A strong saline odour prevails here, as on the sea shore; notwithstanding which the ground all around the small space where the springs rise was under cultivation, and even seemed very fertile; this appears strange at first, in a spot where there are numerous indications of a mineral and volcanic constitution; one spring oozed out of a bank on which stood a large Papaya tree, and the water passes through its roots, from which it has partly washed away the earth, without at all injuring as it would seem the growth of the tree; the bank over which the water flows, is highly coloured with that yellow-ocreish appearance, which indicates a ferruginous quality in the water.

We met a country-born young man at these springs, who had been sent here by the surgeon at Solo, to try their efficacy in curing him of a disorder, the chief symptoms of which were great debility and loss of the use of his limbs, at least to a considerable degree. He takes a warm bath in one of the springs twice a day, morning and evening, and remains two hours at a time in the bath; he also drinks some water. He has now been using these remedies for two months and derived much benefit from them.

Such a spot of ground with springs like these in England, would doubtless make the fortune of its proprietor, become a spa, like the St. Ronan's Well of Walter Scott, and perhaps in time rival

Cheltenham and Baden Baden, that is, with the aid of sufficient puffing by medical men and the parties interested.

At the side of the way before the entrance to this collection of mineral springs, stood a kind of fancy screen of brickwork, and several monstrous figures in stone and plaster, the work of our ancient *cicerone*, as he told us himself, but in which we could discover neither ornament nor use.

We returned to the Prince's house by another hilly path, having described nearly a circle of about six miles circumference as we were told. Throughout this circuit, the romantic and picturesque points of view are very numerous. We arrived about six o'clock, and our ride qualified us to do justice to the Prince's dinner, which was served immediately, and concluded as usual with several toasts, among which the healths of the Resident, Colonel N. and Prince Mangko Negoro the II were not forgotten.

There was some very fair venison on table, though the cookery of it was inferior to that of Europe; it was the spoil of a fine deer, killed for the occasion of our visit; the Prince's lands abound with them, and some of his family are said to be keen sportsmen, as he was himself in his younger days.

After the dessert and the toasts, we managed to pass the evening with a rubber of whist and cigars; fortunately there were no *rongengs* on this occasion, otherwise our Princely host would perhaps have preferred witnessing their performances; we were glad to escape them, and retired early, to rest from this day's fatigues and recruit for those of tomorrow.

15th August—At $\frac{3}{4}$ past 5, we mounted our nags and bent our course towards the foot of the mountain Lawu, by a very circuitous and hilly path, cut in some places on the faces of the hills, in others passing over them, then descending into deep ravines, the late or present beds of mountain streams, where the passage is rendered very difficult by the large loose stones that have been propelled by the torrents from the hills adjacent. The scenery is most picturesque, now wild and romantic, then soft and fertile; it reminded me forcibly of the country in the interior of Padang, but is perhaps still better cultivated; wherever cultivation is practicable, it has been introduced, the dry crops reach even to the summits of the smaller hills; scarcely a foot of ground is lost. The crops looked beautifully fresh and green, though this is the season of heats and drought, a proof that there is here abundance of water, or that the rains are frequent, which indeed are generally concomitant advantages of a hilly situation in these countries.

About an hour and a half's riding at a moderately fast rate brought us to the ruins, which are on a hill, entirely surrounded by other hills, all forming part of the base of the mountain Lawu, which rose in lofty majesty above them, and whose upper outline of deep blue, stood out in bold relief before a very clear sky.

These architectural remains are of a character quite distinct and

different from those I saw at Brambanan and Kulassan; they are built on three terraces, slightly elevated one above the other; they can hardly be called temples; the principal building stands on the last or highest terrace, and resembles a flattened pyramid of square form or four sided, with a door in the centre, in the front or west side; this doorway opens to a passage, up a flight of narrow steps, which lead to the top of the building. This passage is closed or faced by a stone wall on each side, so that there seems to have been no apartment within the building, or if there were, the entrance to it cannot be now discovered; it seems as if the building were formed of the hill itself cut down, and faced with stone.

This building seems about 25 feet high from the ground, and about 40 feet long at the bottom of each side, decreasing as it ascends, to perhaps half that size; at the height of 20 feet, there is a kind of cornice, which appears to have been somewhat ornamented with sculpture, while the rest of the building is quite plain. On the middle of the roof, or rather platform at top, is a raised stone, with a hole in the centre, perhaps the pedestal of some idol, or object of worship, to which the whole building may have been only an altar, with a staircase for the officiating priests to ascend it.

On the terrace below, at each side of the entrance, is a very large tortoise of stone, with flat back. On one side of the large building are the remains of two small ones, now too much mutilated to discover their purpose or forms, though this appeared also to have been pyramidal; one of them was called the Kitchen by the Prince who accompanied us, perhaps because his suite had boiled water there for tea, but it did seem to have been intended for the use of fire, probably to burn incense, or offerings to the idol, whatever it was; the walls of these smaller buildings, are sculptured all round with grotesque images in relief, and many others are lying around on the terrace; of these some represent human figures larger than life; others with wings and talons, the heads broken off; others the figures of animals, as elephants, bears, and nondescript monsters which the world ne'er saw.

Near the remains of a small building, at the side of the large one, but below it, are three flat stones, sculptured in relief; one represents a Javanese blacksmith at work, another his assistant blowing the native tube-bellows, on the third a figure something like the Hindu Ganesa, with the head of an elephant.

On some of the stones are inscriptions in rude characters, cut in relief, and also on some of the larger figures.

In the front of the terrace, or on the west side, is a kind of pyramidal porch or door-way, still tolerably perfect, with steps leading up to it on each side; an immense grinning head, something like those at Brambanan, is sculptured over the entrance—on the sides of this porch numerous figures have been sculptured, but most of them are so much defaced by the effects of time, depredating cognoscenti, or both, that it would require to deci-

pher them a longer inspection than my companions were disposed to allow me; the figures, however, appear all more or less monstrous and grotesque.* There would seem to have been two more porches or gate-ways, between this one and the principal building, but the whole, except these two, are very ruinous.

We learn from the history of Sir Stamford Raffles, that a date cut in stone and found in these buildings, has been traced to be that of the Javan year 1361; comparing this with the Christian era, according to the general mode of calculation, it would be about A.D. 1430, that is to say, nearly four hundred years ago; this is about 300 years later than the supposed period of the buildings at Brambanan. The Mahomedan religion had then been recently introduced on Java, but had not yet expelled that of the Hindus, to some sect of whom these buildings of Sukie are attributed; they were probably, with those of Mojo Pahit, near Surabaya, among the latest of their works of this nature on Java, prior to the conversion of the natives to the Mahomedan creed, and the emigration to Bali and other parts of those who adhered to Hindu rites.

But I had no time for further enquiry, or close examination of these ruins; being obliged to hurry away in obedience to the call to breakfast, made by the Prince our host; he had very kindly had it prepared for us on the spot, on the principal terrace or platform of the temple, under an *improvised* canopy of fresh green leaves, from the cocoanut, pisang (plantain) and other trees in the neighbourhood, which threw a pleasant shade over our table.

Immediately after our early meal, I reluctantly quitted these mouldering vestiges of former ages, and of a system of religion now unknown, but in which idolatry and impurity seem to have been the principal features, judging, at least, from the remains that are still found here.

We resumed the mountain path towards Karang Pandan, where we arrived about nine o'clock, somewhat tired and heated, but without any accident, notwithstanding our indifferent horses and saddles &c.

The distance from Karang Pandan to Sukie is said to be about seven English miles, so that we had only ridden fourteen miles this morning, there and back; but the broken, difficult nature of the road caused us more fatigue than that distance on a good and level road would have done, besides our climbing up and down the ruins.

No sooner had we re-entered the Prince's house, than a second breakfast was brought on table; we begged our host, however,

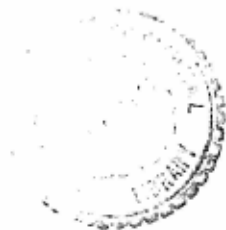
* This character seems to appertain to all that was sculptured at Sukie, or at least to all that now remains there. Some of these works are gross and indecent, and on the whole they evince a degenerated state of the art, far inferior, both in design and execution, to the sculptures I have seen elsewhere on Java, especially those at Boro Bodor.

to change this into a tiffin at noon, as it would be next to impossible to eat again so soon. We made use of the interim to bathe, dress and rest ourselves; the Pangeran in the meantime left us, to make, as he said, the necessary arrangements on the road for our return to Solo.

This we commenced immediately after tiffin, between twelve and one o'clock, in the heat of the day, in order to reach the Residency in time to take breath, as it is said, before dinner;—this was the desire of the majority, to which I submitted, though I would have preferred returning in the cool of the evening, and giving up the dinner.

We found the heat, accordingly, very annoying while on horseback, though not so oppressive as I had expected, the sky being more or less overcast, and a little breeze at times refreshing us.

We reached Karang Anjar, where the carriage had been left, about half-past two; here we were detained half an hour, to repair as well as we could, an accident that had happened to one of the wheels, and which we did not observe yesterday. We were glad to take our seats in the carriage again, after so much rough and hot riding. The river was a little shallower than yesterday, and the carriage was dragged through it easily enough, by several men stationed for the purpose. We arrived at Solo about half-past four, somewhat tired, and just in time to have an hour's rest before dressing for dinner.



ERRATA IN CHAP. V., SECS. 2 & 3 OF "ENQUIRIES INTO
THE ETYMOLOGICAL HISTORY AND RELATIONS OF THE DRA-
VIDIAN FORMATION &c." IN THE PRESENT NO.

- PAGE
301, In Title of Chap. after "CAUCASIAN" insert "INDO-EUROPEAN."
306, line 9 from bottom, after "that" insert "it."
307, line 13 from bottom, for "Ballage" read "Ballagi."
307, line 4 from bottom, for "a soft medial," read "a soft and a medial."
308, line 3, for "Burmah, Tibetan," read "Burma-Tibetan."
312, line 13, for "dialectic," read "dialectic."
312, line 15, for "indefinitive," read "indefinite."
312, line 5 from bottom (Note), for "Peruvian" read "Permian."
313, line 14, for "past" read "past."
316, line 2, for "Tatar," read "Scythic."
316, line 19, for "watak," read "wataks or wataksul."
317, line 11, before "finals" insert "liquid."
319, Note †, for "omid-chime" read "omi-dchi-me"; for "omit-chame,"
"omi-tcha-me"; and for "gaid-chame," "gai-dcha-me."
320, line 24, for "otis" read "dis."
320, Note † dele "am and"
321, line 5 from the bottom, for "S.W." read "S.E."
321, line 21, for "Astiak" read "Ostiak."

ERRATA IN CHAP. IV., SECS. 4 TO 7.

- PAGE
187, Note *, I is improperly treated as a feminine particle in Kasia. It is
purely plural.
203, Note *, line 7, for "they" read "thy."
204, Note, line 20 from bottom, for "Qualificatives" read "qualitives."
208, line 20, for "Oronds" read "Gonds."
"33, after "entered" read "India."
211, line 21, for "eerb or adsertive," read "verb or assertive."
216, line 24, for "Mal; avande" read "Mal. avande;"

ERRATA IN THE "JOURNAL OF AN EXCURSION &c." IN APRIL
AND MAY NOS.

- PAGE
227, line 19, from top, for *insinuates*, read *insinuates*.
228, last, for *we pray*, read *we to pray*.
232, line 10 from bottom, for *have*, read *had*.
233, line 6 from top, for *is*, read *are*.
line 3 from bottom, for *dish*, read *dishes*.
235, line 3 from top, for *opinions*, read *opinion*.
line 16 from bottom, for *last*, read *least*.
236, line 18 from top, for *the the*, read *the*.
line 20 from bottom, for *Tumungung*, read *Tumungung*.
line 19 from bottom, for *of Semarang*, read *of the Semarang*.
line 18 from bottom for *terriries*, read *territories*.
line 17 from bottom as in line 20, read *Tumungong*:
237, line 5 from bottom, for *Dilangee* read *Dilangu*.
238, line 14 from top, for *Kulassun*, read *Kulassan*.
line 20 from top, for *ditto* read *do*.
239, line 17 from bottom, for *profession*, read *profusion*.
241, line 20 from bottom, for *Daendals*, read *Daendels*.
line 4 from bottom, for *Agan*, read *Agung*.
242, line 11 from bottom, for *was a*, read *was in a*.
244, line 21 from bottom for *Adapati*, read *Adipati*.
246, line 20 from top, for *Anon* read *Anom*.

Cal-
1.5.79.

"A book that is shut is but a block"

CENTRAL ARCHAEOLOGICAL LIBRARY

GOVT. OF INDIA
Department of Archaeology
NEW DELHI

Please help us to keep the book
clean and moving.
